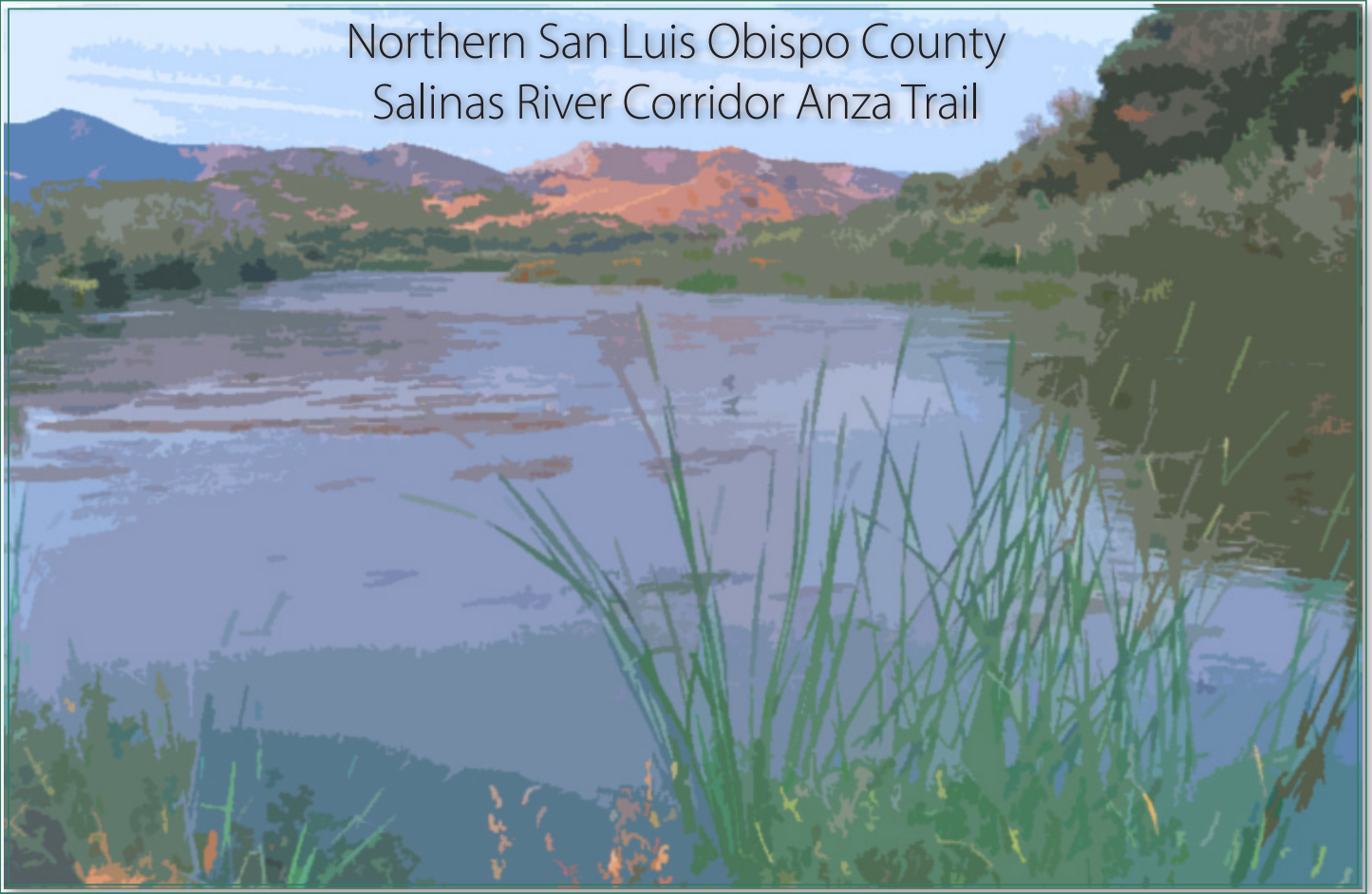
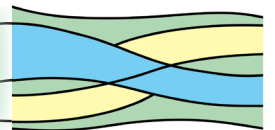


# Salinas River Trail

Northern San Luis Obispo County  
Salinas River Corridor Anza Trail



Conceptual Master Plan - February 2014



Prepared by:



In association with:



Prepared for:





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# Salinas River Trail Master Plan



**Introduction and Summary**

**1**





# Introduction and Summary

# 1

This master plan is a partnership of the San Luis Obispo Council of Governments (SLOCOG) and the County of San Luis Obispo and funded by the California Department of Transportation (Caltrans). A Steering Committee oversaw master plan development with representatives from the communities of Templeton, Paso Robles and Atascadero, as well as San Luis Obispo County, SLOCOG, Caltrans and the National Park Service.

This plan addresses an approximately 35 mile section of the Salinas River corridor between the communities of Santa Margarita and San Miguel in northern San Luis Obispo County. This is a designated trail corridor in the County's Parks and Recreation Element that runs the length of the Salinas River in San Luis Obispo County.

The Salinas River Trail Master Plan defines both feasible short-term and desirable long-term alignments for a regional trail through the North County sub-region. It defines specific future trail alignments within the Salinas River corridor. It also summarizes geographic conditions in six reaches that comprise the overall study area, as well as master plan recommendations and estimated costs.

This master plan is intended to serve as a guide so that different partners can construct individual trail segments over time and ensure that these pieces will ultimately be part of a coherent trail system that connects at the proper locations and provides access from various origins and destinations. It includes trail design concepts and standards that can be tailored for various trail reaches in urban and rural areas and different communities along the trail.

The following sections provide an overview of the plan's background, goals, objectives and study area. This includes a description of the public and stakeholder participation process integral to the planning process, as well as master plan document organization.

## 1.1 Master Plan Purpose

This master plan will serve as a guide for municipalities that engage in constructing individual components of the project and help to direct efforts toward a coherent regional trail system.

The plan addresses the development of the Salinas River Trail (SRT) along a 35 mile section between the communities of San Miguel and Santa Margarita. Northern San Luis Obispo County is primarily agricultural and the area's gently rolling terrain and light traffic make it a popular recreational cycling venue for local riders. The local weather and natural scenic nature of the area also make it a popular area for hiking, equestrian use and walking or running.

A primary opportunity for the trail is to become an officially designated National Historic Trail. Such designation would increase awareness of California's cultural heritage, draw historic trail enthusiasts and provide cultural educational opportunities for local schools and other cultural organizations. Additionally, Anza Trail designation opens up the opportunity for other grants for enhancements such as trail improvements, interpretive signs, trail furniture such as shade structures and benches, viewing and information kiosks, as well as educational programs and activities.

Given the trail alignment's natural surroundings, trail construction will provide opportunities for environmental restoration and enhancements, improved watershed health and other ecosystem benefits. The potential for stewardship programs and hands-on learning through "outdoor classrooms" could open up a range of opportunities to work with local youth, scouts, Cal Poly State University, seniors and others on projects that transcend borders and boundaries.

***"An increase in the number of people walking and biking for transportation and recreation has a range of benefits, including some that can be measured, such as improved traffic level of service, reduced greenhouse gas emissions, and lowered traffic and parking congestion. However, some impacts that are harder to quantify are no less important. These include improved public health, an enhanced sense of place and community, and economic development."***

*Source: Plan Scope of Work*



Figure 1-1: Regional Map



## 1.2 Salinas River Trail Background

As the regional transportation planning agency, SLOCOG was awarded a Caltrans Transportation Planning Grant to prepare a river-themed multi-purpose Anza Trail System along the Salinas River corridor. The SLOCOG 2010 *Regional Transportation Plan* (RTP) identifies a North County section of the Anza Trail along the Salinas River corridor.

The regional Salinas River corridor trail system concept grew out of the City of Paso Robles' *Salinas River Vision*, which included creating a "destination" trail system along the Salinas River corridor, connecting San Miguel and Santa Margarita. The trail was intended to be designed for use by bicycle commuters between communities, as well as provide for recreational uses, including hiking, bird watching, horse riding, cycling and others. The Salinas River Trail was intended to be a destination trail that attracts a wide range of user groups that could also provide significant economic development opportunities to attract more tourism to the region.

Study area cultural resource surveys indicate that humans have inhabited the river valley for thousands of years. Though the river itself is not generally navigable, its corridor was a significant regional route, used first by Native Americans, followed by the Spanish. In 1775, the Viceroy of New Spain authorized Juan Bautista de Anza to command an expedition of soldiers and their families to occupy and settle the port of San Francisco. His route through the Salinas River Valley became the El Camino Real, the principal overland route used by Spanish explorers and missionaries and early Mexican settlers and the critical emigration and supply route from Sonora to the missions and settlements of Alta California. Most of the master plan study area within the Salinas River Valley coincides with this route.

Congress authorized the Juan Bautista de Anza National Historic Trail in 1990. The 1,200 mile trail, which is part of the National Parks System, is one of only a few long distance National Historic Trails. As originally planned, it would run from Nogales, Arizona, to San Francisco, California, following as closely as possible the historic route taken by Anza. However, since the expedition started in Culiacan, Sinaloa, Mexico, plans are under way to include the 600 miles of the route that lie within Mexico to make it the world's first International Historic Trail.

This National Historic Trail corridor travels northward through San Luis Obispo County, along Highway 101 to Santa Margarita, then follows the Salinas River to Paso Robles. This master plan addresses the Anza Trail corridor from Santa Margarita north to Paso Robles. The remainder of the study area lies along the river north of Paso Robles (where the Anza Trail corridor swings northwest away from the river), continuing to San Miguel.

While there are no specific funding sources allocated for Anza Trail projects, the National Parks Service does certify trail sections that meet the Anza Trail requirements and has a cost sharing program that provides a 50 percent match of up to \$30,000 per project. Certified Anza Trail sections can also use the Anza Trail emblem on distance markers and interpretive signs. Parts of the existing trail system within Atascadero have such signage.

## 1.3 Vision, Principles, Goals and Objectives

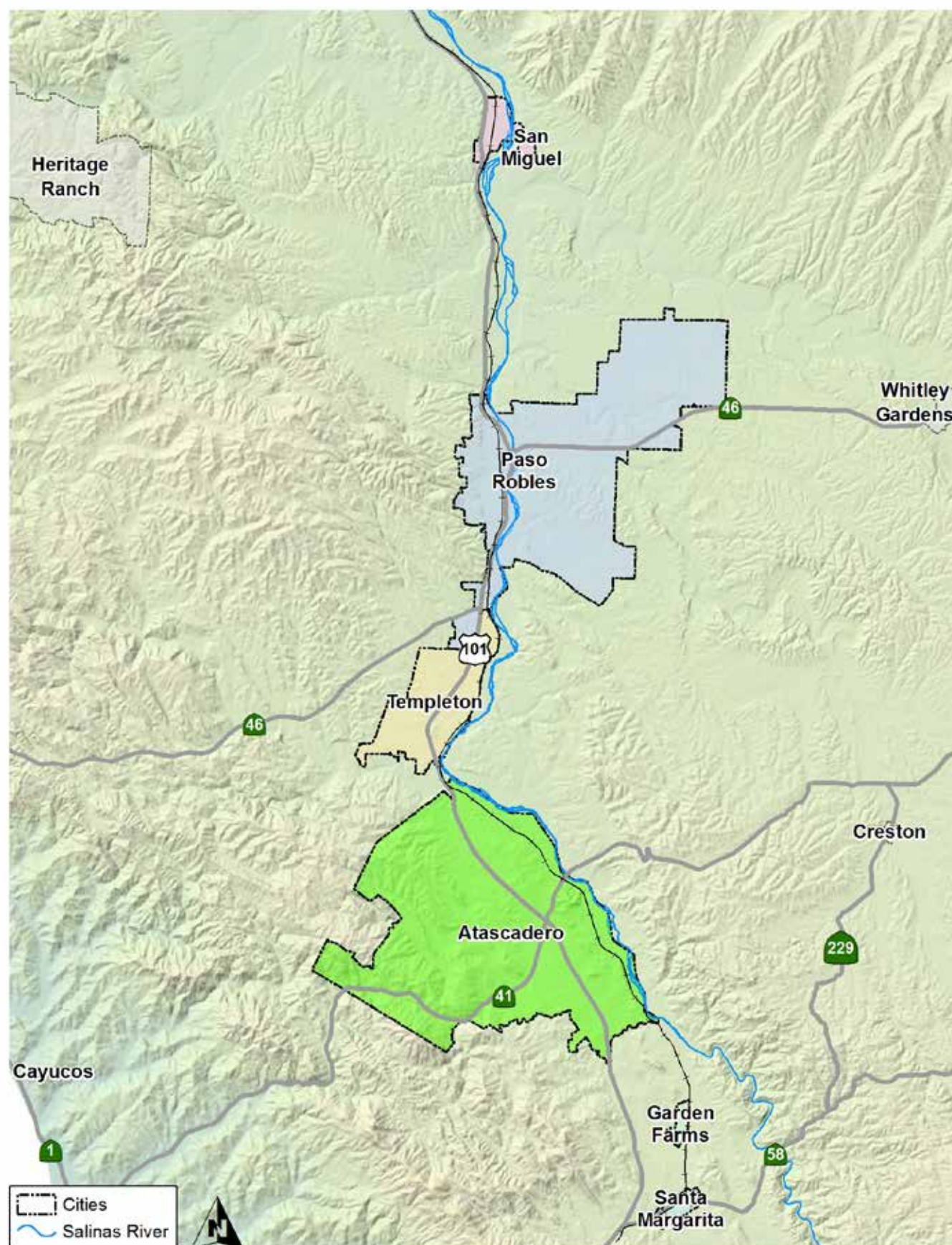
The SRT is envisioned to be a continuous interconnected public trail system along the Salinas River in northern San Luis Obispo County, designed to foster appreciation and stewardship of the scenic and natural resources through hiking, biking and horseback riding, provide a non-motorized transportation link between the area's municipalities and enhance local economic development through tourism.

A vision statement was developed during the first public workshop crafted from attendee input (See Appendix C: Stakeholder and Public Outreach):

*"The future Salinas River Trail will provide North County with access and views to river valley natural open space. The trail will be designed for both transportation and recreation, will be safe for pedestrians, cyclists and equestrians alike, and will be respectful of the environment and private property. The trail's connectivity and accessibility, along with its well-maintained amenities, will be a draw for both residents and tourists that will provide economic benefits and an educational link to the Salinas River's habitat, history and culture".*



Figure 1-2: Vicinity Map



**Figure 1-3: Juan Bautista de Anza National Historic Trail**



The master plan's main objective is a river-themed, braided trail connection that provides a catalyst for economic development and collaborative programs between communities. This master plan process addressed the objectives defined in the project RFP:

- *Regional Multi-Purpose Trail System: Create a safe and fully integrated off-highway trail system between communities for recreationalists and commuters alike.*
- *Anza Trail Connection: Obtain federal designation and recognition for historical route.*
- *Regional Destination Recreation: Create an opportunity for "Eco Tourism" for hiking, biking, bird watching and more.*
- *Regional River Restoration: Create an opportunity for organized networks of river restoration groups for project construction and maintenance system support.*
- *Ecosystem Education: Provide opportunities for interconnected programs for watershed health and stewardship.*
- *Outdoor Classrooms: Facilitate a hands-on learning environment that transcends borders and boundaries.*
- *"Follow the River ~ Follow the Dream" Art Program: Provide opportunities for an inspirational art program that provides beauty and learning opportunities along the river.*
- *Funding: Leverage funding for plans and projects through multi-agency collaboration.*

While the overriding goal remains a continuous north-south route, it also includes creating trail connections and loops to accommodate local trips, connections with important local and regional destinations and providing amenities and support facilities to make the main route and local branches more engaging and functional. These connections and loops are the envisioned "braided" trail connections.

Working with the Steering Committee, the following principles, goals and objectives guided master plan development:

## **1. Protection, Enhancement and Access to Nature and Culture (N)**

### **Nature Guiding Principles**

River corridors are often home to a highly diverse assemblage of sensitive plant and animal species. Access to these areas should be allowed since they include the visual resources that draw people to the river and represent an opportunity to educate the public about environmental stewardship, which in turn, helps to protect sensitive river corridors. Access can be allowed through appropriate planning and trail systems design. A trail is not only about connecting places, but is also about connecting people with nature and with history. Where impacts to sensitive areas cannot be avoided or mitigated, the trails should be realigned.





## **Nature Goal Statement**

**N1: Provide a trail system that respects natural, visual and cultural resources.**

## **Nature Objectives**

- *NO1: Avoid damaging or impacting the resources that attract users to a natural resource-based trail system, including land-form, water, biological resources and visual assets.*
- *NO2: Understand and respond to environmental conditions so that the trail and associated public access do not detract from the scenic resources nor damage sensitive places that the trail seeks to make accessible.*
- *NO3: Encourage access as a sense of discovery, play, recreation and exposure to nature.*
- *NO4: Protect the historical and cultural resources along the corridor, while simultaneously highlighting and providing educational information about them.*

## **2. Water Quality and Quantity (W)**

### **Water Guiding Principles**

The Salinas is known as the “upside down” river since it flows from south to north and most of its flow is underground. Flood plains and active floodways need to be taken into account to avoid trail damage. Water quality should not be impacted by trail alignments and they should, in fact, be designed to help improve water quality where possible. Groundwater is also an important resource that needs to be protected.

### **Water Goal Statement**

**W1:** Place trails and enhancements in areas that are not subject to highly erosive floodwaters and assure trail development does not increase flooding or degrade water quality, but instead increases water quality and flood protection.

### **Water Objectives**

- *WO1: Keep the trail close to the river as an integral component of the trail experience and public ownership opportunities, but not so close as to subject permanent improvements to flood damage.*
- *WO2: Allow low investment soft-surface trails with limited amenities to be located in the floodplain/floodway zones, realizing that these trails may need to be re-established after larger flooding events.*
- *WO3: Provide well-defined connections between the hard surface and the soft surface trails that will endure through flooding and help to make it clear where to re-establish the soft surface trails.*
- *WO4: Integrate engineered and non-engineered solutions to drainage along the trail improvements that protect the improvements, but also help to improve water quality.*
- *WO5: Utilize soft surface trails to limit runoff and water quality issues where possible, while still providing a hard-surface trail backbone that also addresses water quality and water quantity issues, such as using surfacing that decreases runoff and limits petro-chemical leaching.*
- *WO6: Utilize natural processes to help cleanse water through bio-swales, wetlands and other non-engineered solutions and habitat enhancements.*

## **3. Connectivity (C)**

### **Connectivity Guiding Principle**

Citizens should be able to walk, run or ride along the river connecting open space, scenic views, historical sites and areas of quiet contemplation. The public should also be able to use the trails to get to school, work, recreation and shopping.

### **Connectivity Goal Statement**

- *C1: Provide a safe and fully integrated off-street trail system between communities for local commuting purposes, as well as recreational purposes for local citizens and visitors.*

### **Connectivity Objectives**

- *CO1: Accommodate local trips, connect to important local and regional destinations, and provide amenities and support facilities to make the main route and local branches more engaging and functional.*
- *CO2: Connect trails to local destinations to provide a complete regional trail network.*
- *CO3: Work closely with agencies to support eco-tourism (i.e. hiking, biking, bird watching) as part of trail planning.*

## **4. Property Rights and Public Access (P)**

### **Property Rights and Public Access Guiding Principles**

Public access needs to be balanced with private property rights. Well-designed trails can minimize adjacent impacts to properties. There are many public benefits that can be derived from trail systems, but they should not be realized at the expense of private property rights. However, without the cooperation of private property owners, the desired trail may never be realized. This plan needs to set out the potential direct and indirect benefits to property owners and make assurances that impacts will be kept to a minimum.

### **Property Rights and Public Access Goal Statement**

**P1:** Provide a trail system that is fully connected with minimal out-of-direction and out-of-experience alignments, while protecting private property interests.

### **Private Property and Public Access Objectives**

- *PO1: Obtain access first through publicly owned lands or public rights-of-way. Then consider easements or land purchase from willing property owners where direct connections are essential. If a property owner is unwilling, then consider alternative alignments around the properties in question.*
- *PO2: Provide information to property owners on the laws and policies that protect property owners from public access risk and liability.*
- *PO3: Communicate the financial, environmental, health, economic and social benefits of trail systems to property owners and the general public.*
- *PO4: Plan and design trails to increase the value to adjacent property owners. Assure property owners that trails will not be placed adjacent to their properties without their concerns being addressed in project design features and alignments.*



## 5. Trail Experience (E)

### Trail Experience Guiding Principles

Safety and connectivity are the important foundations for a trail system. Trail amenities make a simple connection into a public resource. Trail design treatments can make the difference between a low impact and highly desired trail or an impactive, unsustainable and little-used trail system. Trail surfaces, fencing, barrier controls, revegetation, site furnishings and educational signage are all features that can improve the trail experience.

### Trail Experience Goal Statement

- *E1: The trail system should enhance the user experience by taking advantage of visual and physical access to the river resources and only add features that reinforce the existing character and river context.*

### Trail Experience Objectives

- *EO1: Design trails that support user interest by incorporating visual, topographic, historic and natural features.*
- *EO2: Design trails in an attractive and clear manner that encourages users to stay on them.*
- *EO3: Route trails to highlight the river corridor context.*
- *EO4: Work closely with local, regional, state and federal agencies to plan for the improvement, management and operation of the Anza Trail and provide both a regional and local interpretive program on natural processes and historic context.*
- *EO5: Create opportunities for an inspirational river art program that provides beauty and learning opportunities along the river ("Follow the River ~ Follow the Dream" Art Program).*

## 6. Community Building (B)

### Community Building Guiding Principle

A public trail program represents an opportunity for the general public, agencies and private interests to cooperate on a project that has the potential to benefit a broad sector of the community. Properly done, trail systems can grow an area's economic base, positively affect local property values and support local businesses.

### Community Building Goal Statement

- *B1: Create a river themed, braided trail system that provides a catalyst for economic development and collaborative programs between communities.*

### Community Building Supporting Objectives

- *BO1: Create a plan that is well accepted by the residents, the community and involved agencies.*
- *BO2: Support collaboration among local officials, planners, residents and community groups to create a balanced plan that addresses infrastructure, community identity, site character, human activities and nature.*
- *BO3: Work closely with volunteer groups to develop river health, recreation and awareness programs.*

- *BO4: Promote the positive economic aspects of the proposed trail system for both local land and business owners, as well as the benefits that support local venues, points of interest and tourist-related industries.*

## 7. Implementation (I)

### Implementation Guiding Principle

The value of a regional trail system is based upon the continuity of facilities and the elements connected by the trails. Though economic and political realities will require the system to be built as segments, all efforts need to be concentrated on providing a connected trail system to achieve the desired benefits and to gain the support of the user base and broader community.

### Implementation Goal Statement

- *I1: Provide a plan that is both visionary, as well as realistic, so that it can be implemented.*

### Implementation Supporting Objectives

- *IO1: Create a plan that is cost-effective to implement and maintain.*
- *IO2: Leverage the collective strength of multiple agencies to access funding, and then collaborate to efficiently manage plan and project implementation.*
- *IO3: Create an overall master plan map to support partner agencies' progress in building their segment of the trail system.*
- *IO4: Identify specific trail projects that can be pursued in the near-term, as well as projects that will require more detailed studies, planning or negotiations before implementation.*
- *IO4: Provide tools and data to support trail building efforts and/or easements as part of major development projects. Trail alignments, standards and intended connections are all important to communicate early in the design review process.*

### Potential Implementation Performance Measures

In order for the region, SLOCOG, the County and local municipalities to keep track of the progress of the overall trail system and to motivate continued implementation, the following metrics should be monitored and reported on when programming, requesting or summarizing the successes or goals attainment of the project:

- *PM1: Number of miles of trails*
- *PM2: Number of connections within the trail network*
- *PM3: Number of trail network access points*
- *PM4: Number of educational programs*
- *PM5: Number of river program volunteers*
- *PM6: Number of trail-related businesses*
- *PM7: Property values along the trail network*
- *PM8: Amount of litter along the trail network*
- *PM9: Number of trail-related incidents*
- *PM10: Trail user satisfaction*



## 1.4 Public Input

Every effort was made to inform the public about the project and encourage participation in formulating the master plan. A project web site ([salinasrivertrail.org](http://salinasrivertrail.org)) was created early in the process and linked to the SLOCOG web site. The site was designed to make background information, workshop reports and draft documents readily accessible. SLOCOG issued a press release at the start of the project and articles appeared in the San Luis Obispo Tribune/San Luis Obispo.com advertising the public workshops and the link to the project web site.

The consultant team provided information to and collected input from the community via public workshops and direct stakeholder outreach. Input from the three public workshops and outreach is summarized below. Appendix C: Stakeholder and Public Outreach, provides detailed documentation of comments voiced during the workshops, as well as other written comments received.

### 1.4.1 Public Workshop #1: Project Goals, Objectives, Opportunities and Constraints

The first public workshop was held at the Templeton Community Center on December 12, 2012. The meeting purpose was to introduce the plan to the community, present key findings from the preliminary existing conditions analysis, identify vision themes to characterize the future trail and gather input on project area preferences, assets, needs and issues.

### 1.4.2 Public Workshop 2: Design Criteria, Opportunities and Constraints and Draft Trails

The second public workshop was held on March 18, 2013 at the Atascadero Community Center to review project opportunities and constraints and to discuss trail types and typical locations. It began with a PowerPoint presentation of the design criteria, relevant policies and statutes, associated support features and design concepts, as well as the workshop format, which included interactive exercises with breakout groups to involve the public in the details of trail planning.

### 1.4.3 Public Workshop 3: Draft Trail Master Plan

The third and final public workshop was held at City of Paso Robles' City Council Chambers on July 15, 2013 to review more refined alternative trail alignments. This was an open house format to review the master plan content and celebrate plan accomplishment and to obtain final comments.

### 1.4.4 Public Review Document

During the months of November and December, 2013, the public review draft resulted in 21 sets of written comment letters. These can be found at the end of Appendix C. In addition, the local City Councils reviewed these plans and obtained public testimony, reflected in some of the input shown in Appendix C.

### 1.4.5 Stakeholder Interviews

At the outset of this planning effort, the project team collaborated on a comprehensive stakeholders list based on contacts gathered from previous planning efforts in the region, as well as through a brainstorming session with the project Steering Committee. The goal was a list of key individuals and organizations that should be considered and informed about the process.

The overall stakeholder database eventually contained over 200 potential contacts and was supplemented with information from the three project workshop sign-in sheets. The master list included individuals and organizations such as jurisdictions (cities, county and community services districts), agencies and entities (National Park Service, environmental agencies, local tribes), local advisory committees, transportation entities (Caltrans and Union Pacific Railroad), property owners and individuals (historians and local decision makers). The list was used to disseminate key information about upcoming project events and important project website updates.

Throughout the first half of 2013, the consultant team conducted approximately 15 face-to-face and telephone interviews with organizations and agencies representing a range of expertise, affiliations and connections to the study area. These interviews were designed to discuss goals and objectives, gather their input on the project and engage them in the effort with an invitation to upcoming workshops. Key stakeholders interviewed for this effort included:

- *Friends of Margarita Proud*
- *California Department of State Hospitals*
- *Central Coast Motorcycle Association*
- *Amigos De Anza*
- *Land Conservancy of San Luis Obispo County*
- *Upper Salinas Watershed Coalition*
- *Atascadero Mutual Water Company*
- *Los Padres National Forest*
- *Atascadero Association of Realtors*
- *Paso Robles Association of Realtors*
- *SLOCOG Citizen's Advisory Committee*
- *Northern Chumash Tribal Council*
- *Atascadero Back Country Horsemen*
- *SLO CO Trails Commission*
- *Union Pacific Railroad*

See Appendix C: Stakeholder and Public Outreach for additional information.

### 1.4.6 Online Survey

An online survey was maintained throughout the project to collect respondent demographics, desires, concerns and their potential use of the planned SRT. A substantial number of questions were directed specifically at adjacent property owners to assess their opinions on potential issues related to trail development. The 104 survey responses helped to provide an understanding of the demand for a future river trail, preferred activities, desired trail amenities, as well as likelihood for support. Survey results are summarized in Appendix C: Stakeholder and Public Outreach.

## 1.5 Study Area

The master plan addressed a study area of approximately 35 miles along the Salinas River between the communities of Santa Margarita and San Miguel, as shown in Figure 1-1. Between Santa Margarita and Paso Robles, the study area is located in both the Salinas River corridor and along the nationally designated Anza Trail corridor. North of Paso Robles, the Anza Trail corridor diverges northwest away from the river, while the study area continues along the Salinas River to San Miguel.

The region is characterized by a sandy river bed within a gently sloping alluvial valley that transitions into rolling hills that frame the valley. Several generally east-west flowing drainages run into the Salinas River. The river itself runs north, conveying runoff towards the Pacific Ocean at Monterey Bay. The river is shallow above ground, periodically dry for long periods, with much of its flow underground due to the riverbed's porosity and numerous aquifers.

Study area communities include San Miguel, population 2,336, Templeton, population 7,674, Paso Robles, population 42,751, Atascadero, population 28,310, Santa Margarita, population 1,259 and Garden Farms, population 386. (Source: 2010 Census.) These are primarily a combination of bedroom and agricultural communities with commercial areas. Livestock grazing and wine grape cultivation are the predominant agricultural activities along the river. Native vegetation includes riparian woodlands, oak woodlands and chaparral.

Providing connections to visitor services and destinations is an opportunity for making the SRT useful to visitors and locals while enhancing the area's tourist economy. Lodging tends to be concentrated along Highway 101, especially in the larger communities of Paso Robles and Atascadero.

*Throughout this master plan, unpaved routes are referred to as "trails," while paved routes are called "paths." The master plan study area is composed of six "reaches," broken down further into discrete "segments."*

Measured at Paso Robles, highs of 90°F or higher occur an average of 87 days each year and lows of 32°F or lower occur an average of 54 days. The annual precipitation is 12.57 inches falling over an average of 42 days, from November through March.

A defined study area and criteria for alternative alignment prioritization were developed with Steering Committee input. Alignments were analyzed for multiple trail types, ranging from soft surface within the riverbed to on-road paved routes, where necessary. This resulted in a primary direct alignment on which the recommendations and cost estimates were based.

### 1.5.1 Study Area Reaches

Since the trail is primarily along a river course, the hydrologic term "reach" has been used to describe a long extent of the river. Individual trail components are defined as segments, where the trail type or characteristic is the same for all portions of that segment.

The following descriptions provide an overview of the six reaches that cover the proposed 35-mile SRT system from Santa Margarita to San Miguel. The trail corridor study area was defined through a combination of Steering Committee input, local knowledge and mapping analysis to delineate reasonable limits that kept the trail alignment as close to the river as possible in order to obtain the positive river edge experience and, when involving private property, placed in locations that are not developable for the owner and where the "bank of the river" location can rely on the public waterway use doctrine that strives to assure public access to river resources.

The maps show the proposed improvements for each of the reaches and contain all of the alternative routes that may be possible for three different trail types. Later in this document, a primary direct route for soft surface trails and a primary direct route for hard surface paths was identified and analyzed. Note that this "primary route" designation should not be misconstrued as a selected or preferred route. It simply refers to a combination of trail segments that do not have a dominance of challenging factors and are the most direct trail types with an average to great trail experience. Subsequent planning phases will help to determine the economically and environmentally supportive trail segments that make the most sense for the local communities to pursue.

Providing alternatives at this stage allows the plan to move forward without having to seek approval for selected routes and by providing routes that can be analyzed for property owner acceptance, environmental issue avoidance, staff input, political support and cost reduction options through design and engineering. Also, in some cases, the alternative routes may form loop systems or provide parallel routes. Finally, the alternative routes may be needed as interim routes that provide connections now for the corridor, but may be replaced



later with higher user experience routes closer to the river and in more natural open space areas. Trails in such areas will often require more environmental review, property negotiations and political approvals before they can be implemented.

Some of these routes are located next to or on streets. The planning process considered identifying on-road or near-road routes only out to the nearest available on-street routes, even though some are a distance away from the river channel. These alternative routes are important to include in case subsequent review, processing, permitting and approval tasks make part of the primary direct route infeasible. In the early stages of trail development, a continuous route is more important than one primarily next to the river channel.

## **Reach 1 – Santa Margarita to Garden Farms**

*(Santa Margarita Road to Halcon Road in Atascadero)*

Approximately seven miles long, this reach is anchored by the communities of Santa Margarita and Garden Farms. This portion of the proposed trail alignment is bound on the west by Highway 101 and El Camino Real on the east and falls within the historical Juan de Bautista de Anza trail corridor. However, access to the Salinas River corridor is approximately 1.5 miles east of any proposed trail alignment. There are no existing formal or informal trails within the communities of Santa Margarita and Garden Farms, but there are existing recreational trails near Halcon Road that are part of the Las Lomas subdivision in the City of Atascadero. In addition, as part of the discretionary approval process, the Santa Margarita Ranch has been conditioned with providing easements along its property boundaries to provide for trail and multi-use path access. Following initial draft review, the northern segments of this reach were adjusted to avoid private properties along the Salinas River. The hard surface trails were shifted to existing soft surface trails in the Las Lomas development, eventually connecting to Halcon Road.

## **Reach 2 – Atascadero**

*(Halcon Road to the Lakes of Atascadero)*

Approximately six miles long, Reach 2 is located in the heart of Atascadero. This portion of the proposed trail alignment diverges from El Camino Real along Halcon Road and runs parallel along the Salinas River. It is bound on the west by the Union Pacific Railroad and Rocky Canyon Road on the east. This portion of the proposed trail alignment falls within the historical Juan de Bautista de Anza trail corridor and benefits from a majority of formal and informal trails within the City of Atascadero. The City of Atascadero Wastewater Treatment Plant (WWTP) property is home to the Juan de Bautista de Anza “South” Trail section, while approximately two miles of the Juan de Bautista de Anza “North” trail sections are located on property along the Salinas River owned by the Atascadero Mutual Water Company (AMWC). In addition, the Jim Green Trail is located in this reach, which could serve as a potential local trail loop to the SRT.

## **Reach 3 – Atascadero to Templeton**

*(The Lakes of Atascadero to Main Street in Templeton)*

Approximately six miles long, Reach 3 includes the northern portion of the City of Atascadero east of Highway 101 and the community of Templeton. It is bounded on the west by the Union Pacific Railroad and by the Salinas River on the east. This portion of the proposed trail alignment falls within the historic Juan de Bautista de Anza trail corridor and benefits from a majority of existing formal and informal trails within the City of Atascadero. Approximately two miles of Juan de Bautista de Anza “North” and “De Anza Estates” trail sections are located on property along the Salinas River owned by the AMWC and on a designated open space property owned by Grave Creek Estates. In addition, the City of Atascadero “Rail Trail,” which runs parallel with the Union Pacific Railroad and Ferrocarril Road, could serve as a potential trail loop or alternative route of the SRT. One of the critical trail connectors between the City of Atascadero and the community of Templeton is located in this reach at Paso Robles Creek.

## **Reach 4 – Templeton to Paso Robles**

*(Main Street in Templeton to 13th Street in Paso Robles)*

Approximately six and a half miles long, Reach 4 is the connection point between Templeton and the southern limits of the City of Paso Robles. This portion of the proposed trail alignment is bounded by Highway 101 on the west and Neal Spring Road on the east and falls within the historical Juan de Bautista de Anza trail corridor. The City of Paso Robles owns a majority of the properties along the Salinas River, including the “Salinas River Parkway Preserve,” a 153 acre property with intended purpose to provide recreational uses for the community. This portion of the proposed trail alignment benefits from existing informal trails along the Salinas River and almost three miles of formal trails within the City of Paso Robles, including the Charolais Corridor, the Salinas Parkway, the River Road and South River Road Trails.

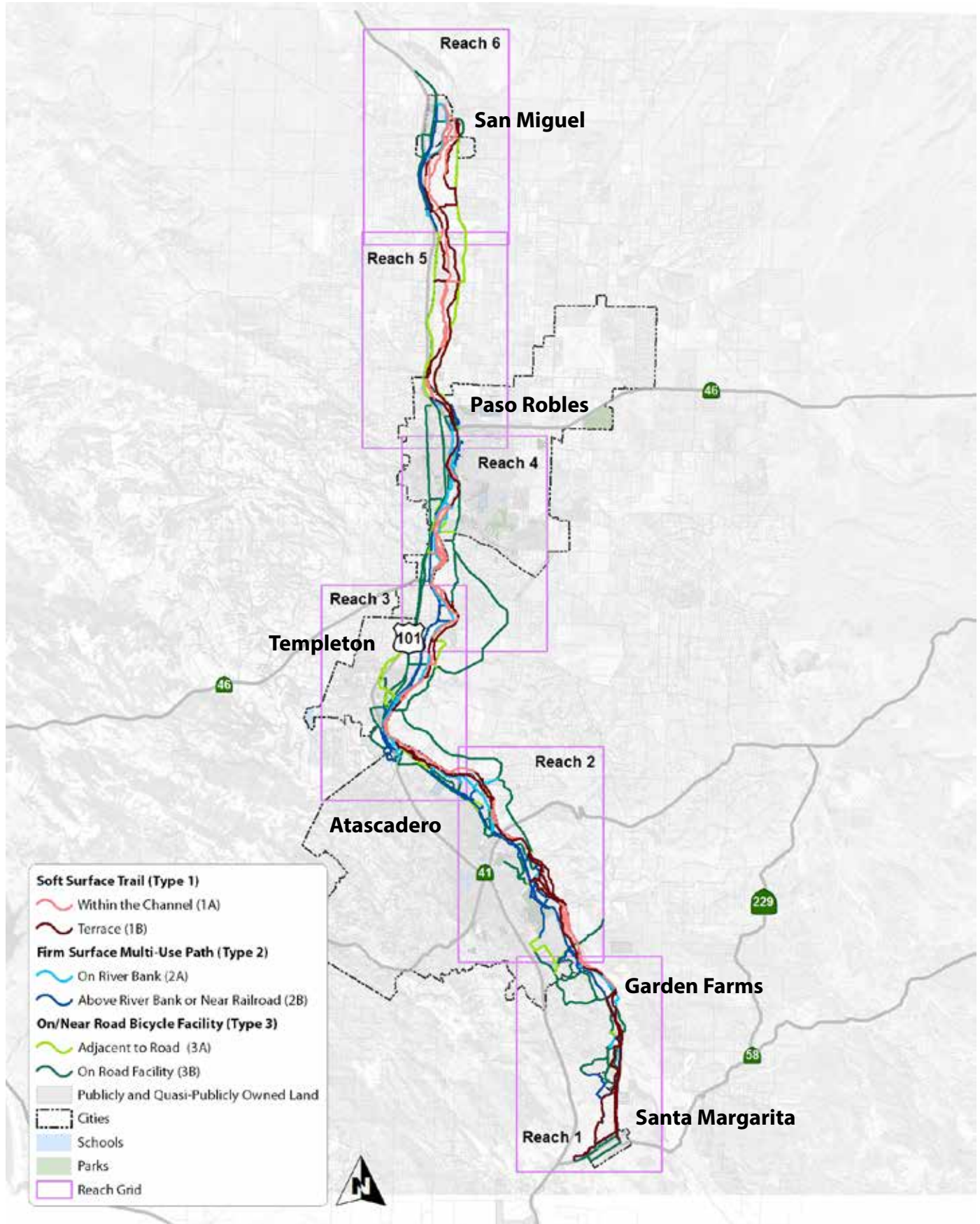
## **Reach 5 – Paso Robles to San Miguel**

*(Paso Robles to Wellsona Road)*

Approximately five and a half miles long, Reach 5 follows the Salinas River Corridor north of the City of Paso Robles towards the community of San Miguel. This portion of the proposed trail alignment is bound on the west by Highway 101 and North River Road on the east and leaves the historic Juan de Bautista de Anza trail corridor, which continues northwest towards Lake Nacimiento. There are no existing formal or informal trails within this reach of the proposed trail alignment. This reach of the SRT has numerous challenges in that the majority of the properties along the Salinas River are privately owned and that North River Road is extremely narrow with little or no shoulders. However, an alignment along North River Road may be desired to avoid conflicts with private property, while improving pedestrian safety and allowing potential trail users to experience the Salinas River Corridor.

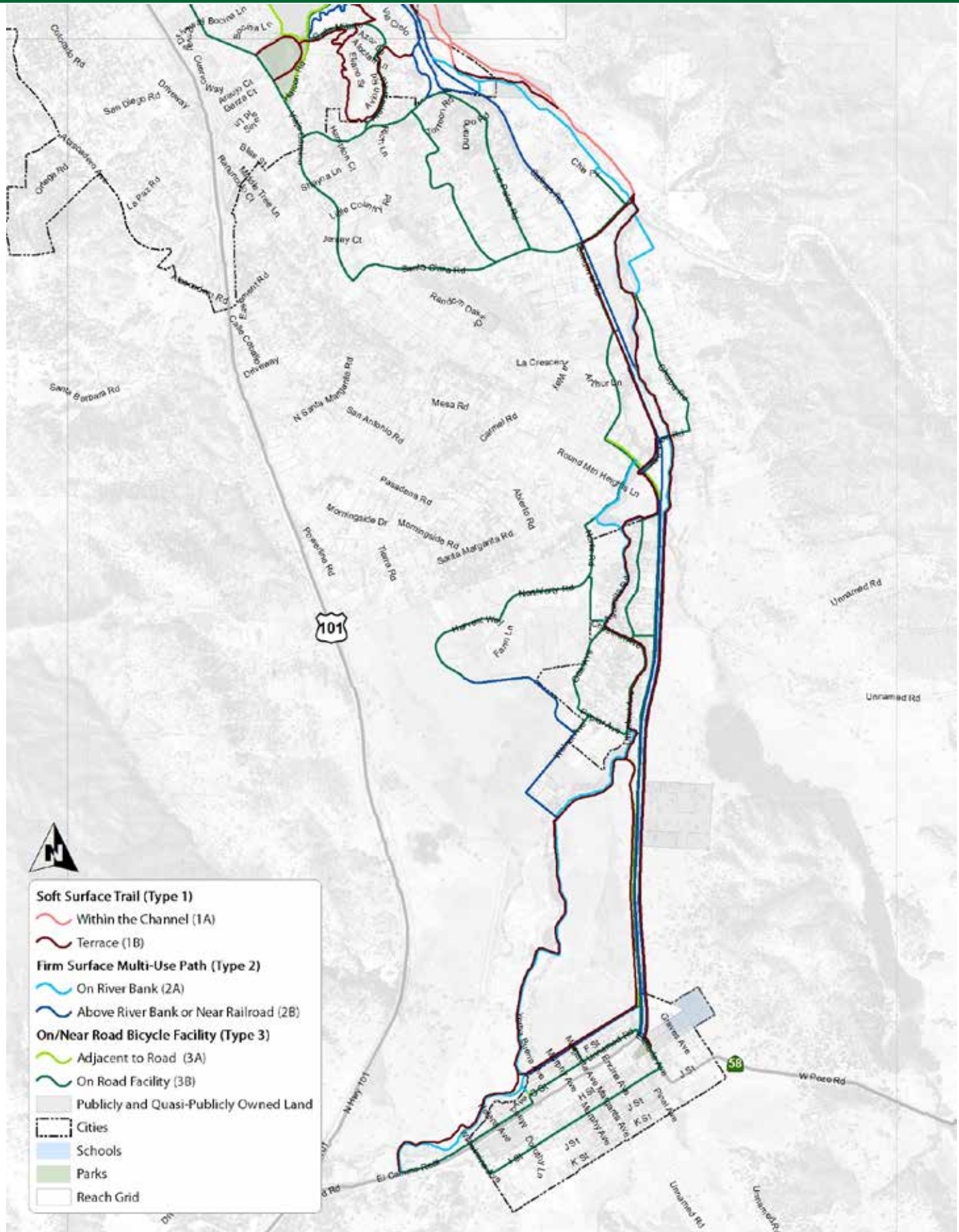


Figure 1-4: Reach Key Map



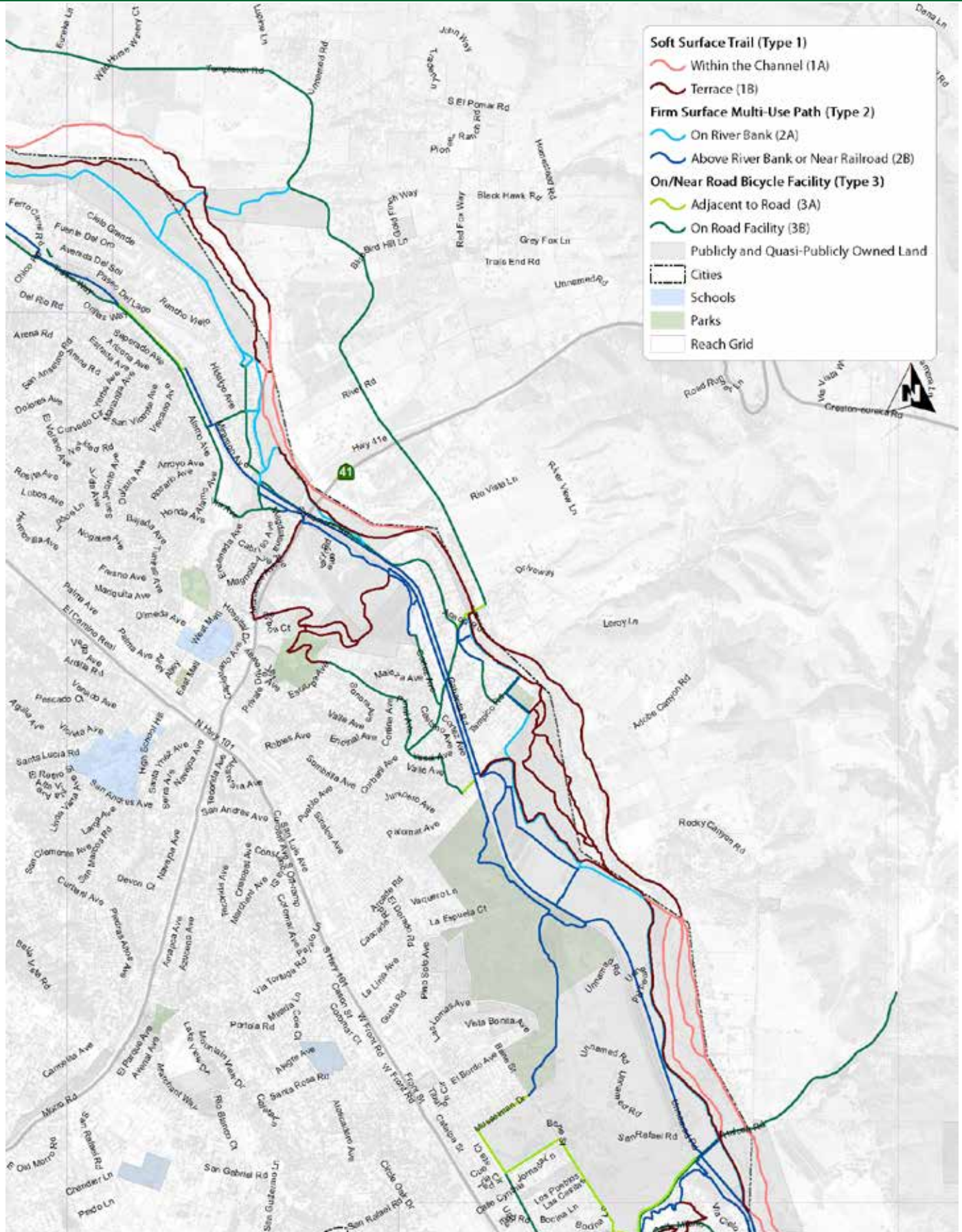


**Figure 1-5: Reach 1 (Santa Margarita to Garden Farms)**





**Figure 1-6: Reach 2 (Atascadero)**





**Figure 1-7: Reach 3** (Atascadero to Templeton)

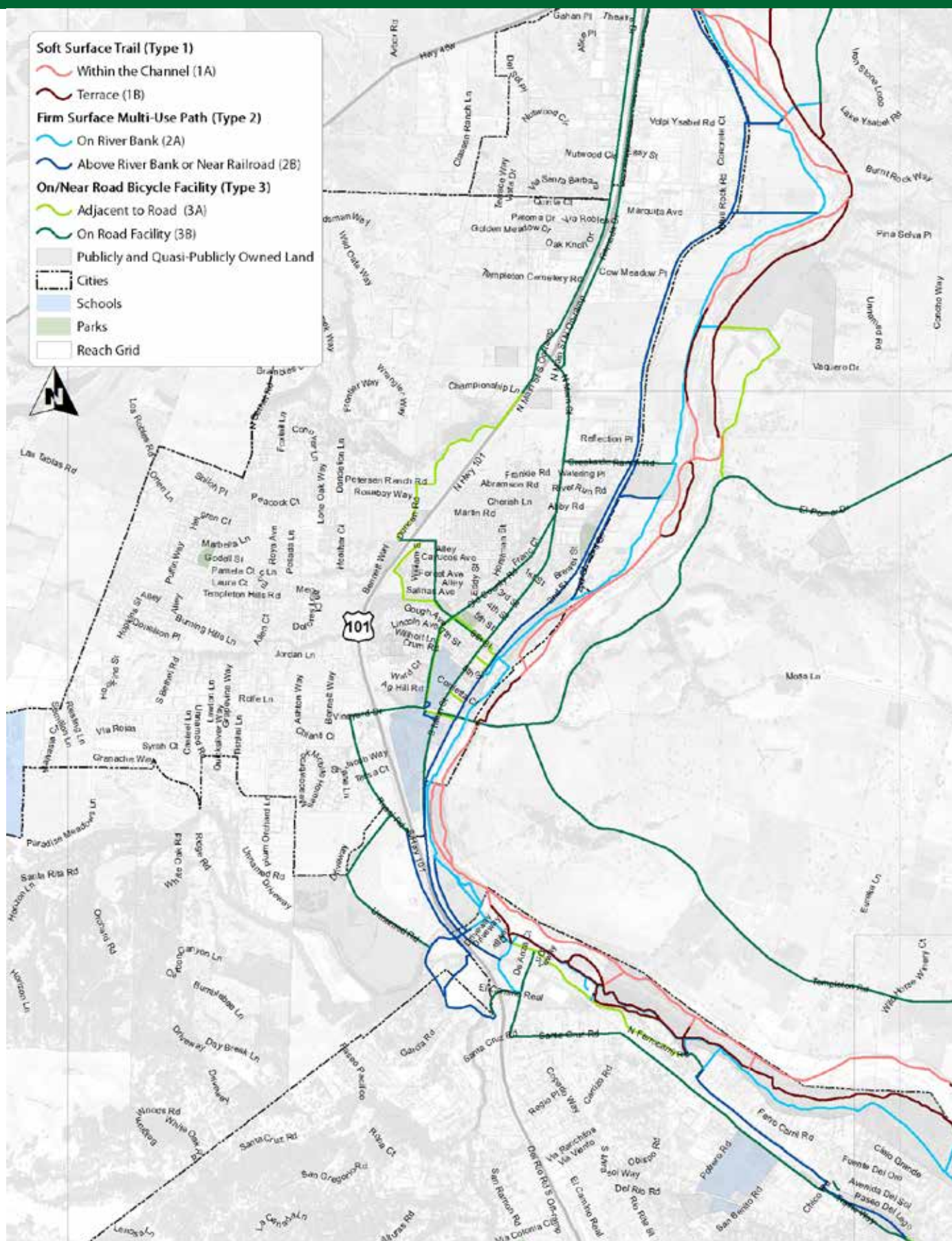
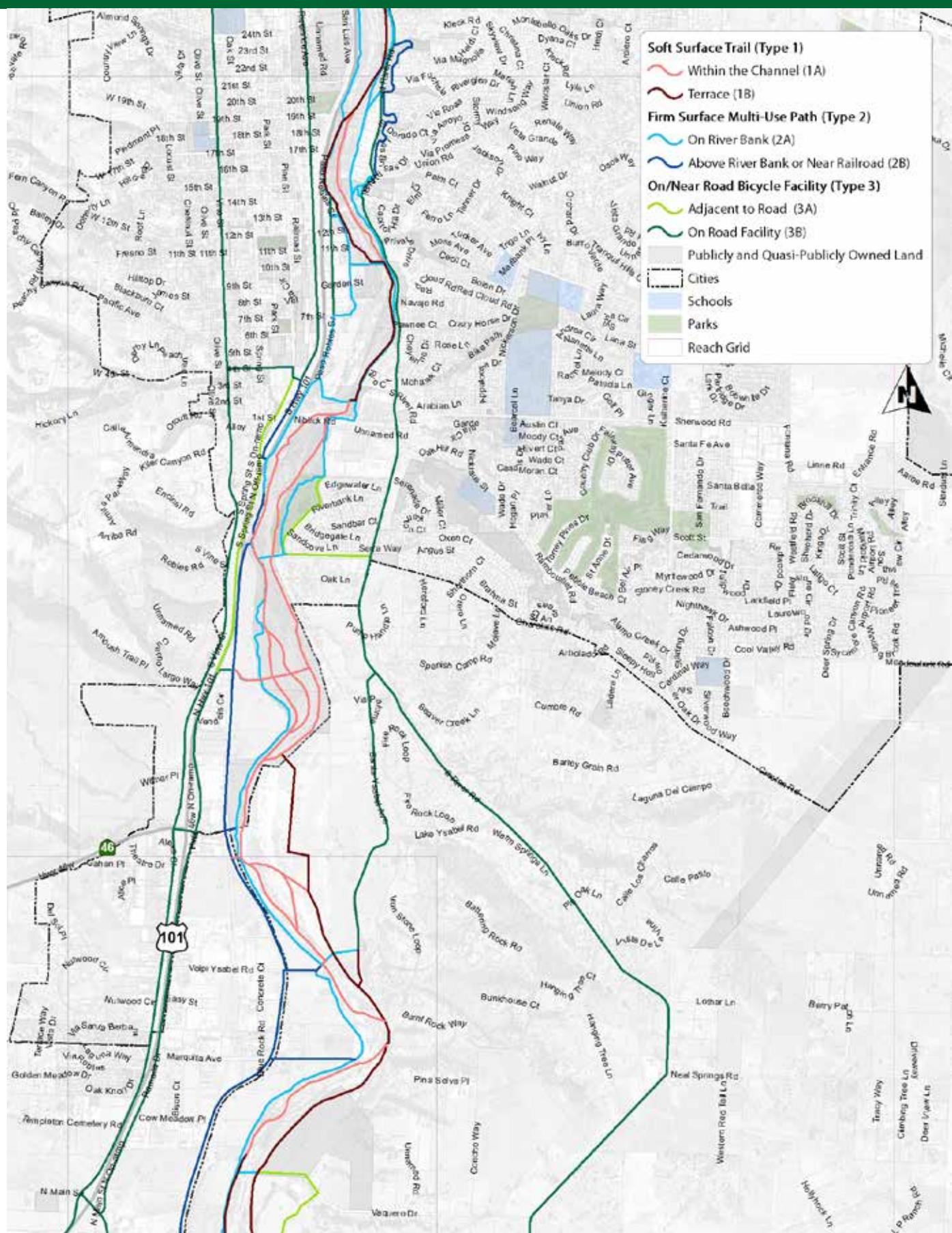


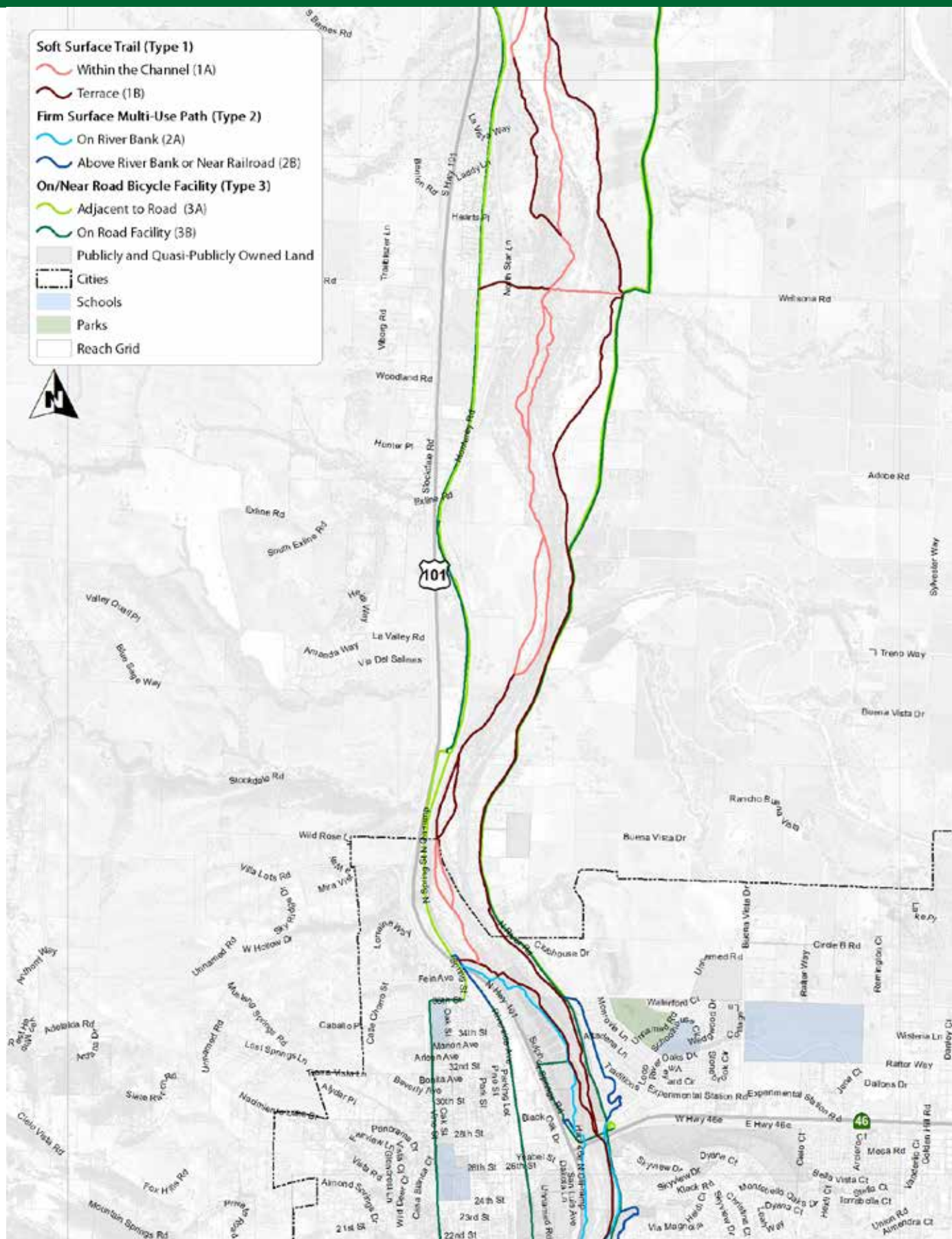


Figure 1-8: Reach 4 (Templeton to Paso Robles)



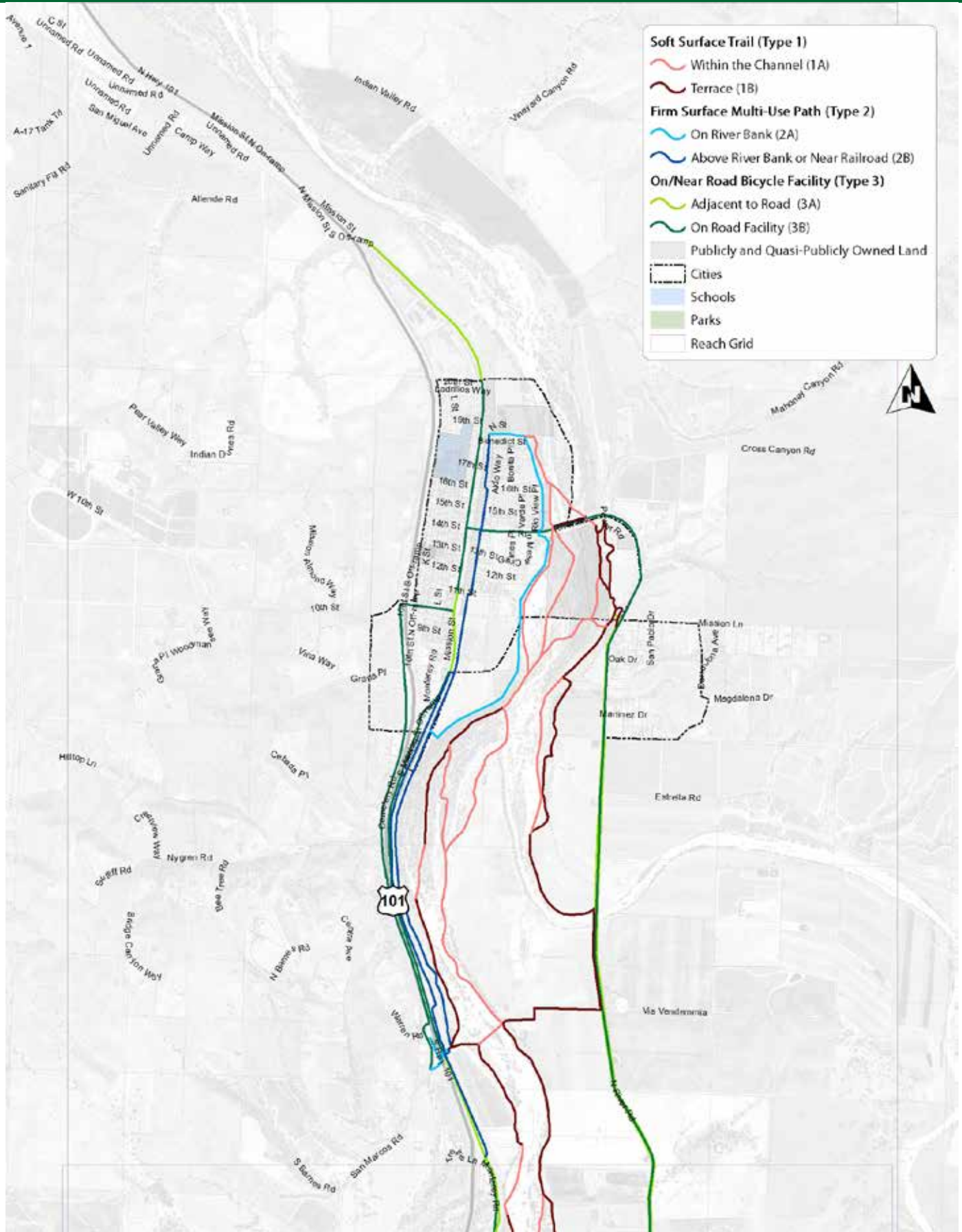


**Figure 1-9: Reach 5 (Paso Robles to San Miguel)**





**Figure 1-10: Reach 6 (San Miguel)**





## Reach 6 – San Miguel

*(Wellsona Road to San Miguel)*

Approximately three and a half miles long, Reach 6 is the northernmost reach of the proposed trail system and is anchored by the community of San Miguel. This reach is bounded by Highway 101 on the west and North River Road on the east. There are no existing formal or informal trails within this reach. This reach has numerous challenges in that the majority of the properties along the Salinas River are privately owned and that North River Road is extremely narrow with little or no shoulders. However, an alternative alignment along North River Road may be desired to avoid conflicts with private property while improving pedestrian safety and allowing potential trail users to experience the Salinas River Corridor.

## 1.6 Master Plan Organization

This Master Plan document is organized into five chapters with supporting appendices:

### Chapter 1: Introduction

Provides an overview of master plan background, goals, objectives and recommendations. It describes document organization and the public and stakeholder participation process that was integral to its preparation.

### Chapter 2: Setting

Provides an overview of the study area setting. It summarizes land uses, attractions and destinations, public lands and existing and planned bike facilities. In addition, this chapter describes environmental resources within the trail corridor and analyzes constraints associated with agricultural, biological and cultural resources, as well as geologic hazards. Lastly, this chapter reports on economic resources, including a summary of tourism-supporting services and amenities.

### Chapter 3: Design Standards and Guidelines

Summarizes standards and guidelines for pedestrian, bicycle and trail facilities that may be part of the SRT network. Multiple public agencies own property within the study area, including Caltrans and DPR.

### Chapter 4: Master Plan Recommendations

Describes the recommended improvements that will comprise the Northern San Luis Obispo County SRT. These recommendations reflect pertinent design standards and guidelines, existing conditions, physical opportunities and constraints, regulatory, legal and guiding documents, as well as public and agency comments on preliminary studies and recommendations.

## Chapter 5: Action Plan

Describes the typical implementation steps to take a SRT project from master plan through construction, along with the legal framework for public trails within river corridors and the types of permits that may be required, the agencies and entities that would likely be parties to the project and basic operation and management requirements.

## 1.7 Recommendations Summary

Environmental resources are summarized in Chapter 2: Setting, and in supporting appendices with more detailed environmental data. The trail alignments and improvements described in Chapter 4: Master Plan Recommendations were carefully designed to respond to environmental resources, permitting criteria and performance standards. These recommendations were also informed by public and stakeholder input and opinions expressed through three public workshops, several steering committee meetings, an online survey, a public draft review period and extensive communication and coordination among the land owning and regulatory agencies.

### 1.7.1 Recommended Improvements Summary

The following descriptions provide an overview of the six reaches that cover the proposed 35 mile SRT system between Santa Margarita and San Miguel. The trail corridor study area was defined through a combination of Steering Committee input, local knowledge and mapping analysis to delineate reasonable limits that kept the trail alignment as close to the river as possible in order to obtain the positive river edge experience and, when involving private property, placed in locations that are not developable for the owner and where the “bank of the river” location can rely on the public waterway use doctrine that strives to assure public access to river resources.

Recommended improvements are described and mapped in detail in Chapter 4. Chapter 5: Action Plan, outlines the associated implementation steps, permits and responsible parties. For quick reference, see Figures 1-5 through 1-10 for specific alignments.

The maps on the previous pages show the proposed improvements for each of the reaches, each of which contain a primary direct soft surface and firm surface route, as well as several alternative routes. Some of these routes are located next to or on roadways. The planning process included identifying on-road or near-road routes out to the nearest available on-street routes, even though some are a significant distance away from the river channel. These alternative routes are important to include in case subsequent review, processing, permitting and approval tasks make part of the primary direct route infeasible, at least for the foreseeable future. A continuous route is somewhat more important than one primarily associated with being next to the river channel.

### 1.7.2 Estimated Costs

Table 1-1 presents a summary of estimated costs by reach. Detailed cost estimates are included in Appendix G, and trail features are described in Chapters 3 and 4.

Construction costs include trail, staging area and drainage crossing improvements. Implementation includes surveys, technical studies and design, environmental compliance and project administration. Permitting includes fees to acquire applicable local, state and federal permits.

Table 1-2 (on next page) summarizes unit costs for many of the trail types and associated drainage crossing options. These costs are calibrated by actual bid prices for comparable facilities or similar trail projects. However, costs can vary dramatically depending on the amount of work included in terms of volume, the bidding climate present at the time of the bid, and a number of major unforeseen conditions likely to surface during the design, engineering, environmental review and permitting stages of plan implementation. Drainage crossing options, which in most cases cannot be determined until later stages of design, are the reason for the wide range of potential costs for most trail reaches. The costs shown here should only be used for preliminary programming of budgets, but should not be relied upon for final budgeting, which needs to occur after design, engineering and permitting have been initiated.

**Table 1-1: Costs by Reach**

<b>Preliminary Design, Engineering, Permitting, Construction and Administration Costs*</b>	<b>Probable Cost</b>
Reach 1	\$6,850,113
Reach 2	\$6,699,503
Reach 3	\$9,106,143
Reach 4	\$6,395,555
Reach 5	\$4,334,535
Reach 6	\$4,469,027
<b>Total</b>	<b>\$37,854,876</b>

\* Construction costs include trail, staging area, and drainage crossing improvements. Implementation includes surveys, technical studies, and design; environmental compliance; and project administration. Permitting includes fees to acquire applicable local, state, and federal permits.

### 1.7.3 Summary of Trail Types

The document includes a broad variety of trail types and trail options. Theoretically, trail development as direct as possible could produce a trail less than 30 miles. However, straight trail segments are not feasible considering the challenging conditions along the route. The plan provides alternative soft surface trail routes of over 81 miles for the 33 mile corridor. The proposed firm surface Type 2 paths consist of over 73 miles of optional routes. Finally, over 111 miles of on-road or near-road routes have been identified (see Table 1.3: Trail and Path Alternatives).

The Primary Direct Route is not necessarily physically the most direct route, but the route with a balance of directness, user experience and avoidance of private property. Table 1-3 also summarizes Type 1 soft surface trails as over 33 miles in length. The Types 2 and 3 firm surface combined are more than 36 miles in length. This represents a reasonable balance of directness and access to the river environment, while avoiding private property and environmental impacts.

### 1.7.4 Private Property Rights and Trail Connectivity

This study recognizes the private property owner concerns associated with possible alternative routes that may be next to or on private property. Every effort has been made to find alternative routes that avoid private property. In some cases, previous commitments of easements and existing trail systems are relied on even though they may cross private property. In other cases, for properties greater than five acres in size, future development of these properties can be required to provide easements for the benefit of public travel, including trail systems.

Finally, a number of benefits to private property owner such as transfer of development rights, tax credits and indemnifications are available through state and federal registration, so the fact that an alternative trail has been shown on private property does not represent any commitment or priority for this trail system, just the desire maintain options. Subsequent planning and design phases will need to determine if a property owner is a willing participant, and in a few small instances, if the public use doctrine for rivers of the United States should be used to evaluate the ability of local governments to require access. For now, understanding the sensitivity of private property rights and concerns, any routes shown on private property are generally not part of the primary route, have been shown as being highly challenging and should be considered only if alternative routes do not appear feasible.

### Landowner Discussion Items

Private property owners should review the following facts about public trails and consider some of the benefits and protections offered prior to requesting being removed from consideration. In many cases, the potential for a connected





trail will depend on the cooperation from property owners. There are federal statutes allowing the public to access waterways in the river directly or along its high water mark or riverbank that can override private property rights. However, it is not within the goals of this project to force public access.

Firm surface trail types 2A and 2B do need to be out of the floodway and away from floodplains as much as possible. The proposed soft surface Types 1A and 1B include hiking and equestrian use along the river bottom and flood plains. These areas are well away from private property improvements and usable or developable lands and fall well within the public waterway use doctrine definitions of public access to rivers of the United States.

## Benefits of Allowing Public Use

**Tourism and Economic Benefits:** Trails are good for the local economy. Property owners are generally no different than others in their local community in wanting to support a viable economic engine, a sustainable source of business growth, jobs, good wages and tax revenues. Helping the Salinas River become a trails destination is a great way to do that.

**Conservation Easements:** Allowing trails is a way to monetize the land without extracting from it. There are a number of arrangements in which landowners can open their property to recreational trail systems in exchange for some monetary benefit, such as voluntary conservation easements. The landowner agrees to protect a part of his or her land from real estate development in exchange for tax-savings benefit. Some conservation easements confer specific uses to the easement holder or to the public.

## Table 1-2: Construction Unit Costs

TRAIL TYPE	CROSS SECTION & UNIT COSTS					COMPOSITE COSTS	
<b>Type 1A: Unimproved 3'-6' Natural Surface Trail in Active River Channel</b>	Vegetation clearance	Unimproved side trail	Unimproved trail	Unimproved side trail	Vegetation clearance	Total cost per lineal foot	Total cost per mile
<i>* assumes some vegetation clearing, with some trailhead signage</i>	1	0	2	0	1	4	
Cost per sf:	\$3.00	\$0.00	\$0.00	\$0.00	\$3.00		
Cost per linear foot of trail:	\$3	\$0	\$0	\$0	\$3	\$6	\$31,680
<b>Type 1B: Improved 4'-6' Firm Natural Surface Trail</b>	Vegetation clearance zone	Compacted side trail	Improved graded natural trail	Compacted side trail	Vegetation clearance zone	Total cost per lineal foot	Total cost per mile
<i>* assumes improved graded trail, moderate extensive vegetation clearing, with some signage</i>	1	0	4	0	1	6	
Cost per sf:	\$3.00	\$2.00	\$2.00	\$2.00	\$3.00		
Cost per linear foot of trail:	\$3	\$0	\$8	\$0	\$3	\$14	\$73,920
<b>Type 2A: 10'-12' Class 1 Path with a 3'-4' Firm Surface Trail next to Path</b>	Vegetation clearance	Graded & compacted side trail	Standard asphalt on compacted base	Graded & compacted side trail	Vegetation clearance	Total cost per lineal foot	Total cost per mile
<i>* assumes paired paved and unpaved trail. Paved component to Caltrans Class I stds.</i>	0	2	10	4	0	16	
Cost per sf:	\$2.00	\$3.00	\$6.00	\$3.00	\$2.00		
Cost per linear foot of trail:	\$0	\$6	\$60	\$12	\$0	\$78	\$411,840
<b>Type 2B: 10' Class 1 Multi-use Path with Separate Firm Surface Trail Nearby</b>	Vegetation clearance zone	Graded & compacted shoulder with drainage	Standard asphalt on compacted base	Graded & compacted side trail	Vegetation clearance zone	Total cost per lineal foot	Total cost per mile
<i>* assumes physically seperated paired paved &amp; unpaved trail. Paved component to Caltrans Class I stds.</i>	0	2	10	4	2	18	
Cost per sf:	\$1.00	\$3.00	\$6.00	\$3.00	\$3.00		
Cost per linear foot of trail:	\$0	\$6	\$60	\$12	\$6	\$84	\$443,520
<b>Type 3A: 10'-12' Class 1 Multi-use Path with a graded shoulder</b>	Vegetation clearance zone	Graded & compacted shoulder with drainage	Standard asphalt on compacted base	Graded & compacted side trail	Vegetation clearance & revegetation zone	Total cost per lineal foot	Total cost per mile
<i>* assumes physically seperated paired paved &amp; unpaved trail. Paved component to Caltrans Class I stds.</i>	1	1	8	1	1	12	
Cost per sf:	\$1.00	\$3.00	\$5.00	\$1.00	\$1.00		
Cost per linear foot of trail:	\$1	\$3	\$40	\$1	\$1	\$46	\$242,880
<b>Type 3B: Class 2 Bicycle Lane or Class 3 Bikeway</b>	Vegetation clearance zone	Graded & compacted side trail	Class 2 or 3 Painted Bicycle Lanes	Graded & compacted side trail	Vegetation clearance zone	Total cost per lineal foot	Total cost per mile
<i>* assumes Class 2 &amp; 3 painted bicycle lanes/markings. Constructed to Caltrans' stdns and some signage.</i>	0	0	6	0	0	6	
Cost per sf:	\$0.00	\$0.00	\$0.50	\$0.00	\$0.00		
Cost per linear foot of trail:	\$0	\$0	\$3	\$0	\$0	\$3	\$15,840

**Transference of Development Rights:** Development rights are the unused rights to develop a property. Some state and local governments have adopted rules permitting unused development rights to be transferred to another parcel to allow construction of improvements, such as a building with greater floor space or height than would be permitted otherwise. As a result of such development rights transfer rules, an owner with excess development rights may benefit by selling them to the owner of another parcel needing them.

**Control of Inappropriate Activities:** A marked trail provides safer channeling of trail users across a property, away from homes, livestock, crops and equipment. Many law enforcement officials support formalized trails because of the increase of people circulating in areas where it would otherwise be difficult to patrol regularly, providing “eyes on the trail.” In some cases, trails actually decrease problems like underage drinking and vandalism. Fencing and signage related to the trail can also help to control trespassing and issues with the adjacent properties. Interpretive signage, volunteer groups associated with the trails and other public educational programs can increase public awareness and respect for the environment and private property.

**Property Value Impacts:** In general, quality trails increase adjacent property values. Developers price homes adjacent to trail systems higher than identical residences just one street away, knowing they will sell first. Landowners are not responsible for the trail in any way, yet one benefit is having a trail right out the back door. The presence of a trail through the property often adds value to the land at no cost to the landowner. Landowner-approved improvements to the land as part of trail implementation, such as grading, bridging or culverts, can enhance the landowner’s use of the land as well.

#### **Property Owner Indemnification**

California Civil Code Section 846 (“Recreational Use Statute”) encourages landowners to permit public recreational use in exchange for immunity from liability if anyone injures him or herself due to a property condition. Landowners who give permission for entry do not extend any assurance that the premises are safe and they owe no duty of care to keep the premises safe for any recreational purposes, or to give any warning of hazardous conditions. The only exception is not limiting the liability that already exists for willful failure to warn against a dangerous condition, or injury to anyone the landowner expressly invited, rather than merely permitted, to come onto the premises. Basically, immunity applies to those permitted to come onto the property for recreational

purposes, but not those paid to be there, like contractors or employees, or invited guests. Furthermore, Government Code Section 831.4 indemnifies anyone who grants a public easement from liability for injury caused by the condition of any unpaved road or trail within the easement that provides access to hiking, riding, recreational or scenic areas.

#### **Public Trust Doctrine**

What started as an English common law doctrine dating to Roman times was adopted into the U.S. Constitution. To this day, all state constitutions affirm public ownership of all running waters. Basically, certain resources have been held to be above private ownership and to reside in the trust of government for the benefit of the people and that it is the government’s duty to administer these resources for the highest public interest.

The doctrine is most often invoked in connection with access to navigable waterways. This doctrine originally applied to fishing, navigation and commerce on waterways, but has expanded to not only include navigable waters, but now apply to streams capable of use by small boats, as well as for such purposes as bathing and swimming, fishing, hunting and general recreational purposes. Since public trust uses have been recognized as including recreational activities, these uses are protected to the high water marks of lakes and rivers, even if these areas are temporarily dry or on dry portions of rivers.

California’s constitution holds that frontage and tidal lands of all navigable waters remain open and accessible to its residents. River and stream beds and banks are a strip of public land to be conserved for public benefit, even where the river or stream passes through private land. California law allows for public access to public waters, but does not grant the public the right to cross private property to reach those waters. However, if it can be proven that a trail or access road has been used for at least 10 years, rights to access across private property can be established through a prescriptive easement.

#### **Definitions (As they pertain to the Public Trust Doctrine)**

**Navigable Waters:** The federal test of navigability is simply whether the river is usable as a route by the public, even in small craft such as canoes, kayaks and rafts. Such a river is legally navigable even if it is temporarily dry, or contains rapids, waterfalls and other obstructions at which boaters must portage (get out, walk around, then re-enter the water). A waterway can be navigable even if it is only physically navigable during the rainy season.



**Ordinary High Water Mark:** States own rivers up to the “ordinary high water mark” (OHWM) that can sometimes actually be seen on the ground, where the water has left debris, sand and gravel during its ordinary annual cycle, not during unusual flooding. Physical characteristics drive OHWM determination, such as a natural bank line, changes in soil character, litter, debris or matted vegetation, or sediment sorting. Where physical characteristics are inconclusive, misleading, unreliable or otherwise not evident, agencies may determine the OHWM by using other appropriate means that consider the characteristics of the surrounding areas, such as flow or elevation data, spillway height, flood predictions, historic records of water flow and other statistical evidence.

**Prescriptive Easement:** This is an easement upon another’s real property acquired by continued use without permission of the owner for a period provided by state law to establish the easement. The problems with prescriptive easements are that they do not show up on title reports, and the exact location and/or use of the easement is not always clear and occasionally moves by practice or erosion.

## 1.7.5 Next Steps

This master plan is a planning-level study of SRT location and configuration. Actual trail project implementation will require additional site-specific study, planning and design, as outlined in the action plan in Chapter 5. Projects will require environmental study and documentation, as well as review and permitting consistent with the complexity of the specific improvements, affected sensitive resources and any related regulatory and easement requirements. A primary objective of the master plan was to identify and, if possible, avoid significant constraints, as well as address anticipated criteria and requirements. Primarily for this reason, significant effort went into alternative alignment analysis and the prioritization criteria developed for this effort are described in Appendix I.

With this Master Plan as a general guide, the County of San Luis Obispo and the Cities of Atascadero and Paso Robles, can move forward with their individual trail planning efforts. Although SLOCOG will continue to support the project with staff assistance and potential transportation, recreation and environmental funding, it will be the responsibilities of the local agencies to move this project forward.

The master plan provides guidance for these efforts by providing a common set of definitions, identifying important connecting points between the agencies and providing ideas on where alternatives can be analyzed, refined and implemented. The realization of a publicly accessible “Braided River” of trails and paths is feasible. However, because of the unique challenges of this corridor, success will only occur if these efforts are coordinated. The political process needs to strike a balance between community benefits of transportation, access to public resources and health and recreation-based quality of life improvements with property owner and environmental resource protection.





# Salinas River Trail Master Plan



Setting **2**



This chapter summarizes study area land uses and destinations, public lands and access easements, as well as existing and planned bicycle facilities. This chapter also describes environmental resources within the study area and analyzes constraints associated with agricultural, biological and cultural resources, as well as geologic hazards. Lastly, this chapter discusses existing economic resources, including a summary of tourist-serving services and amenities. Appendix B: Physical Conditions - Opportunities and Constraints provides a more detailed review of the physical conditions, opportunities and constraints. Appendix E: Environmental Resources Analysis provides a more detailed description of study area environmental constraints.

## 2.1 Existing Land Use

The SRT study area extends between the communities of San Miguel to Santa Margarita, approximately 35 miles. Jurisdictions within the study area include the cities of Atascadero and Paso Robles, the County of San Luis Obispo and its unincorporated communities, the Department of State Hospitals (DSH), the Union Pacific Railroad (UPRR) and the California Department of Transportation (Caltrans). Recreational uses in this area are those typically associated with rivers like the Salinas with its minimal depth and wide, sandy riverbed including hiking, horseback riding, wildlife viewing, sightseeing and OHV use. Surrounding river valley roadways are popular cycling routes and some are identified as bicycle facilities in the San Luis Obispo County Bikeways Plan. Figure 2-1 illustrates study area land uses and Table 2-1 summarizes land uses and combining designations.

### 2.1.1 Destinations

The following are descriptions of the destinations within the study area that draw locals and tourists to northern San Luis Obispo County.

#### Major User Origins

Most trail user origins are local in nature. Area trail groups consider as much as 80 percent of trail users to be local San Luis Obispo County residents. It is likely that at least 50 percent of trail users live within the Salinas River Planning Area, or within three miles of the river, and 30 percent of trail users come from elsewhere in the County.

According to visitor research commissioned by the San Luis Obispo County Visitor and Conference Bureau, the primary visitor markets are the Central Valley (30 percent), Los Angeles and Orange Counties (15 percent) and the San Francisco Bay Area (10 percent). Because destination marketing specifically

targeting the Salinas River Trail is minimal, it is commonly thought that out-of-area visitors are likely coming because of a previous local affiliation or family tie. It is recognized that an increasing amount of destination marketing is focused on cycling, equestrian and OHV recreation, with cycle touring and cycling-related events considered an under leveraged local attractor.

#### Major Local Destinations

Points of interest for local populations include city and county parks, sports fields, downtown areas, movie theaters, shopping areas, fairgrounds, wineries, restaurants and other recreational areas. Some popular destinations for locals include:

##### Charles Paddock Zoo

Located in the Atascadero off Highway 41 West, the Charles Paddock Zoo is the only one on the Central Coast. It provides visitors with access to over a hundred species from around the world, as well as educational programs and special events throughout the year.

##### Chalk Mountain Golf Course

Located in the Atascadero at the end of El Bordo Avenue, Chalk Mountain Golf Course is an 18 hole public golf course surrounded by native oaks and providing unique golfing opportunities.

##### Salinas River Parkway Preserve

The Salinas River Preserve is a 153 acre City of Paso Robles owned property located south of the Niblick Road Bridge along the Salinas River. The preserve was established to protect the natural resources along the Salinas River, to provide public access for recreational uses and to provide educational resources about the river's historical significance.

##### Paso Robles Golf Club

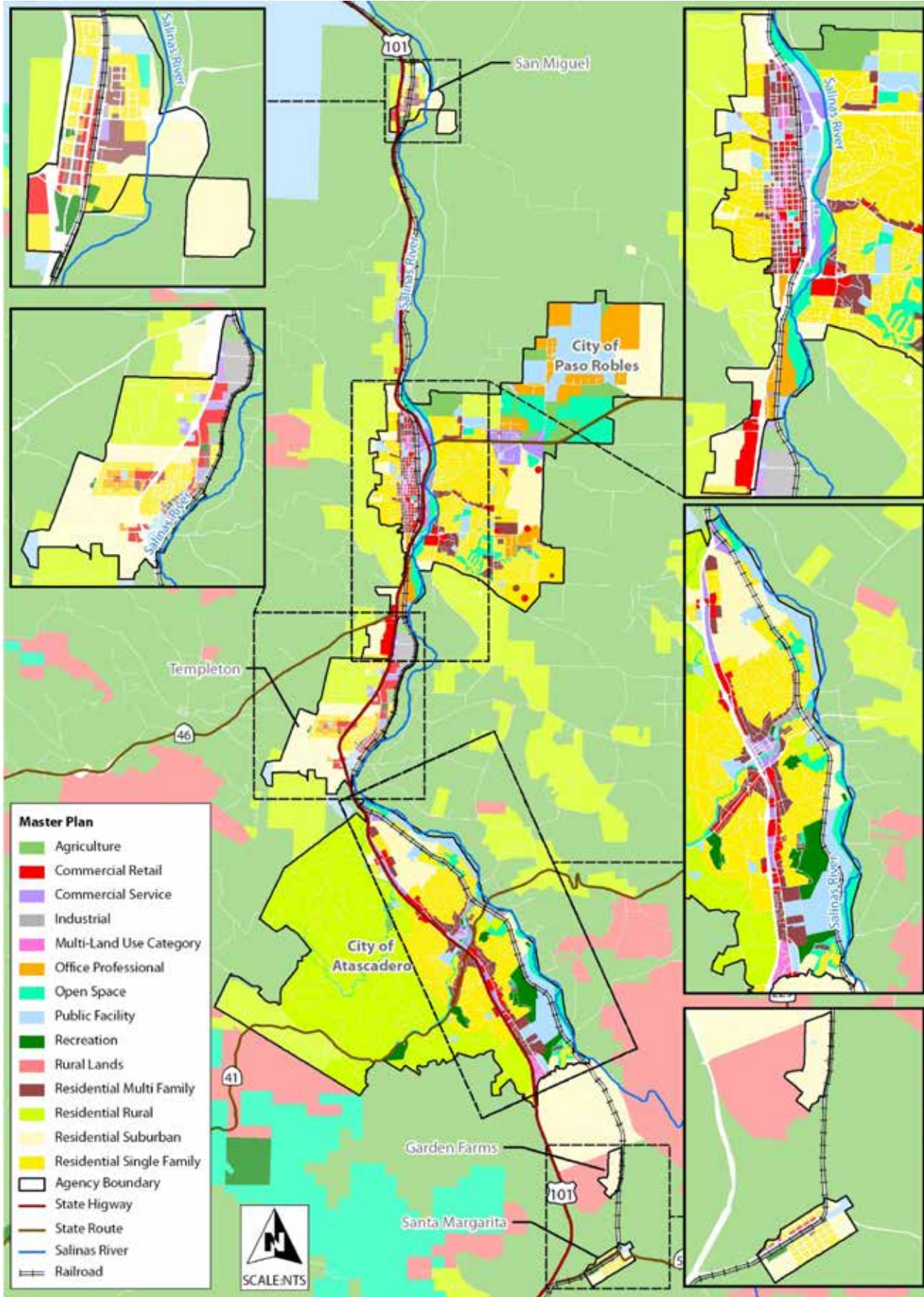
Located in the heart of Paso Robles off Country Club Drive, the Paso Robles Golf Club provides residents with a full 18-hole championship golf course with a fifty year history of serving the community. In addition, the golf course offers a clubhouse, restaurant, banquet facility, veranda and bar.

#### Visitor and Tourism Services

This section provides an overview of the services available to locals and tourists throughout the SRT study area. The concentrations of these services are generally within Atascadero and Paso Robles. Figure 2-2 provides an overview of the distribution of destinations throughout the SRT study area.



**Figure 2-1: Existing Land Use**



### Grocery Stores

There are 20 grocery stores throughout the SRT study area, with most located within Atascadero and Paso Robles.

### Lodging

There are approximately 36 hotels, motels and bed and breakfasts within the SRT study area.

### Public Restrooms

There are 22 public restrooms accessible throughout the SRT study area, with the majority of the facilities located at public parks within each community.

### Restaurants and Cafes

There are over 200 restaurants and cafes located throughout the SRT study area with concentrations within Atascadero and Paso Robles.

### Shopping Centers

There are 29 shopping centers located throughout the SRT study area with the concentration of centers within Atascadero and Paso Robles.

### Major Transportation Routes and Connectors

Making use of the existing transportation infrastructure to provide travel connection nodes and linkages to other destinations increases the utility and permeability of the network. Listed here are the primary and secondary roads that interface with the existing and planned trail network, listed by classification and street name.

#### Paso Robles

- *Principal Arterials:* El Camino Real – Hwy 101, Green Valley – Hwy 46
- *Arterials:* Buena Vista, Linne, Nacimiento Lake, River, Tower
- *Collectors:* Wellsona, Volpi Ysabel, Theater, Peachy Canyon, Marquita, La Cruz

#### San Miguel

- *Principal Arterials:* El Camino Real - Hwy 101
- *Arterials:* River
- *Collectors:* 10th, 11th, 16th, Mission, N River;
- *Collectors:* Proposed, Aldo, Prado – Extension, Rio Vista

#### Templeton

- *Principal Arterials:* Green Valley - Hwy 46, El Camino Real - Hwy 101
- *Arterials:* Main Collectors: 6th, Bennett, Bethel, Cow Meadow, Creekside Ranch, Duncan, Florence, Las Tablas, Marquita, Old County Road, Ramada, Santa Rita, Templeton, Theater, Vineyard, Volpi, Ysabel
- *Collectors:* Proposed Bennett – Extension, La Cruz – Extension, Pendleton - Extension

#### Atascadero

- *Principal Arterials:* El Camino Real - Hwy 101, Morro - Hwy 41
- *Arterials:* El Camino Real, Morro - Hwy 41
- *Collectors:* Santa Rita

#### Garden Farms

- *Arterials:* El Camino Real

#### Santa Margarita

- *Principal Arterials:* El Camino Real - Hwy 101, Calf Canyon - Hwy 58
- *Arterials:* El Camino Real, Estrada, J
- *Collectors:* Encina, I, Wilhelmina

**Table 2-1: Land Use Categories**

Reach	Land Use Categories														Combining Designations		
	Agriculture	Commercial Retail	Commercial Service	Industrial	Multiple Land Use	Office Professional	Open Space	Public Facilities	Recreation	Residential Multiple Family	Residential Single Family	Residential Rural	Residential Suburban	Rural Lands	Historic	Flood Hazard	Extractive Area
1	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
4	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	✓	✓	✓
6	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	



### Hotels, Tourism-Focused Retail, Restaurants, Breweries and Wineries

Desired experience often drives destination choice. Convenient accommodation, good food and entertainment, when combined with available time and budget, are all factors that help to determine the character of a particular outing. Listed here are popular hotels and destinations. More information can be obtained from local tourist commissions and chambers of commerce.

#### Paso Robles Wineries

The Paso Robles wine region has a long history of winemaking and grape growing dating back to 1790 when Franciscan friars first produced sacramental wine. Commercial winemaking began in 1870. Local residents and tourists from outside the region flock to the northern San Luis Obispo County area to explore and enjoy the hundreds of wineries and wine options throughout the Paso Robles wine region.

### Hotels

#### The Carlton Hotel

Located in the City of Atascadero off El Camino Real, the historic Carlton Hotel was originally designed as a single-story block-long building in 1928 with an agreement for a second story 52 room hotel. It has had many different owners and even sat vacant for several years. Recent restoration revitalized the hotel and restaurant.

#### Paso Robles Inn

Located on Spring Street in the heart of downtown Paso Robles, the Paso Robles Inn was originally built in 1889 and was later rebuilt to its current conditions after a 1940 fire. The Inn showcases selected guest rooms with natural mineral spring water tubs. It draws local and visitors from out-of-town for dining and special events and provides convenient access to downtown Paso Robles.

#### Paso Robles Pioneer Museum

Located in the northern portion of the Paso Robles on Riverside Avenue, the Paso Robles Pioneer Museum is a nonprofit museum established in 1975 by the Paso Robles Rotary Club with the intention to preserve the heritage of the City of Paso Robles. The museum is home to many local artifacts, such as the Geneseo Schoolhouse, and events such as the Annual Rockhound Roundup, Pioneer Day and Woodcarving by members of the California Carvers Guild.

### Recreational Amenities

In addition to the existing destinations and services throughout the SRT study area, each community is home to public recreational amenities. These recreational areas include public parks, equestrian arenas, sports fields, golf courses and historical sites. These recreational areas offer amenities such as

baseball diamonds, picnic areas, playgrounds, soccer fields, trails, BBQ pits, disk golf course, skate park, water features, swimming pools, parking and restrooms. Table 2-2 summarizes the recreation areas throughout the SRT study area and Figure 2-2 identifies general major destination locations.

### Community Downtown Centers

Each community within the study area offers locals and tourists with unique downtown experiences including historic sites, downtown city parks, restaurants and shopping.

### Equestrian Facilities

Horse riding is popular along the Salinas River and in the surrounding area. Many area residents consider themselves “horse people” and board horses in private or shared stables. Equestrian activities range from English and Western riding to rodeo and trail riding. Dressage and eventing are increasingly popular competitive activities in San Luis Obispo County.

A few commercial horse operations are:

- Harris Stage Lines, North River Road, Paso Robles
- Silver Shadow Training Services, Wellsona Road, Paso Robles
- Paloma Creek Park, Equestrian Facility, Halcon Road, Atascadero
- Wranglerette Arena, Argon Road, Atascadero
- Golden Valley Equine Training, Santa Margarita

### River-specific Destinations

- Stadium Park in Atascadero
- Swimming hole and geological features - Asuncion Road and El Camino Real in Garden Farms
- River Walk near Niblick Bridge (Kohls) in Paso Robles
- Lawrence Moore Park, Charolais Road, Gabarda Road trailhead in Paso Robles

### History-specific Destinations

There are nine historical sites in the SRT study area:

#### Santa Margarita de Cortona

North of El Camino Real in Santa Margarita and located on Santa Margarita Ranch property, Santa Margarita de Cortona was a sub-mission of Mission San Luis Obispo de Tolosa established to serve Chumash Indians within the Salinas River area. The remains of the mission are incorporated into an existing barn structure and are only accessible by special arrangements with the Santa Margarita Ranch.

#### Juan Bautista de Anza Santa Margarita River to Expedition Camp #83

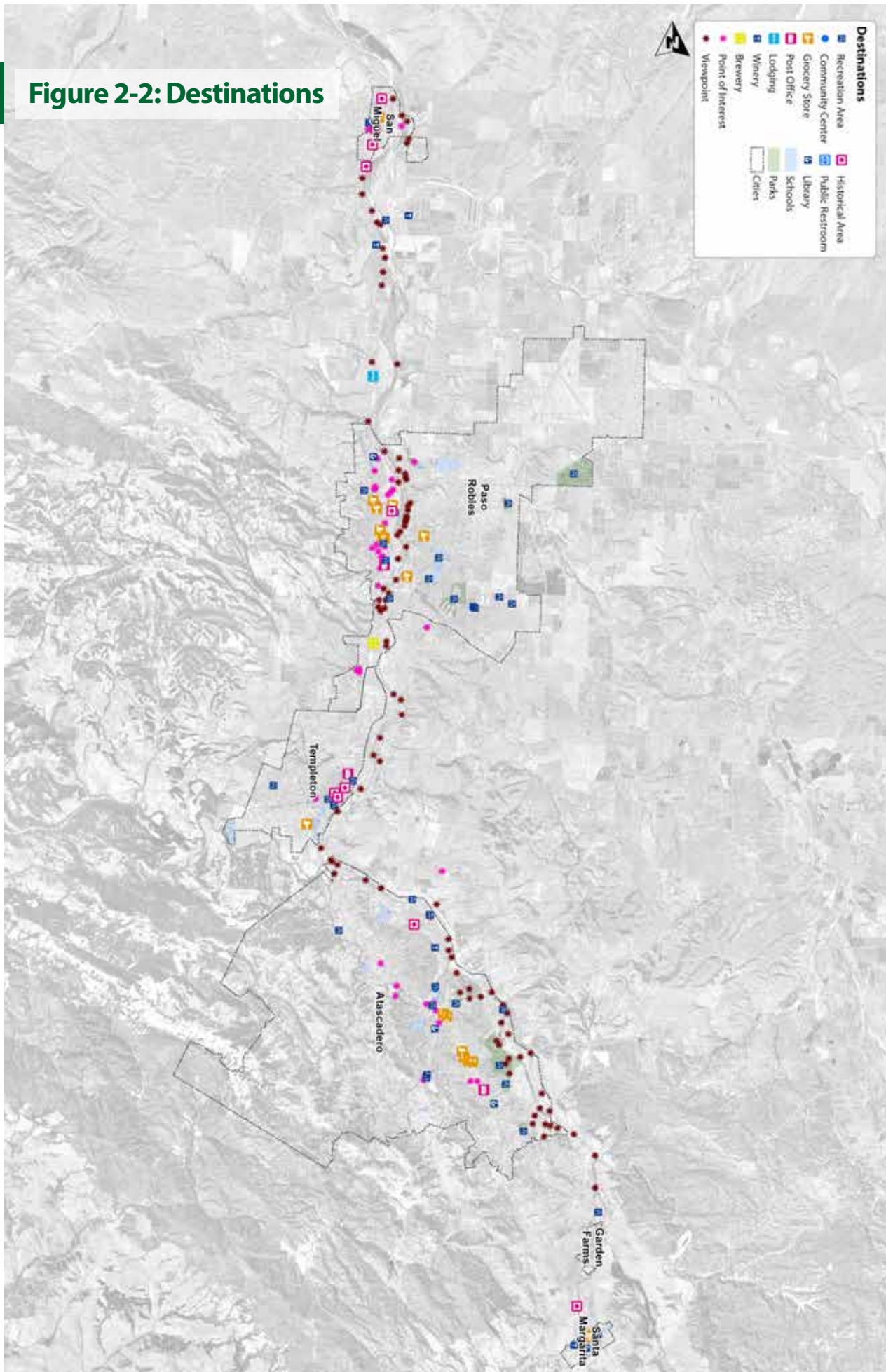
Located in Atascadero along the Salinas River near Ferrocarril Road, this was a village site used by the Juan Bautista de Anza expedition.



**Table 2-2: Recreational Areas**

Reach	Recreational Area	Parking	Signage	Restroom	Amenities
1	Paloma Creek Park	✓	✓	✓	Baseball Diamonds, Picnic Area, Playground, Soccer Fields, Trail
	Paloma Creek Park Equestrian Arena	✓	✓		BBQ, Horse Arena
	Santa Margarita Park	✓	✓	✓	BBQ, Gazebo, Picnic Area, Playground
	Alvord Field	✓	✓	✓	Baseball Diamond
	Atascadero Lake Park	✓	✓	✓	BBQ, Horseshoes, Lake Recreation, Picnic Area, Playground, Trail, Volleyball, Zoo,
	Chalk Mountain	✓	✓		Golf Course
2	Colony Park Community Center	✓	✓	✓	Basketball Courts, Gymnasium, Kitchen, Meeting Rooms, Picnic Area
	Heilmann Regional Park	✓	✓	✓	Play Area, Disc Golf Course, Horseshoes, Tennis Court, Volleyball Court, Barbeque Pit, Picnic Tables
	Stadium Park	✓	✓		Trail
	Sunken Gardens Park	✓	✓		Benches, Water Feature
	Traffic Way Park	✓	✓	✓	Baseball Diamonds, Playground
	Wranglerette Arena				Horse Arena
3	Evers Sport Park	✓	✓	✓	Baseball Diamond
	Templeton Park	✓	✓	✓	BBQ, Gazebo, Picnic Area, Playground, Swimming Pool, Tot Pool
	Tom Jermin Sr Community Park		✓	✓	Picnic Area, Playground
	De Anza Estates Equestrian Arena	✓	✓		Horse Arenas
	Barney Schwartz Park	✓	✓	✓	Baseball Diamonds, BBQ, Picnic Area, Playground, Soccer Fields, Trail
	Casa Robles Park				No Amenities
4	Centennial Park	✓	✓	✓	Basketball Courts, BBQ, Gymnasium, Kitchen, Meeting Rooms, Picnic Area, Playground, Swimming Pool, Tennis, Trail, Volleyball
	Downtown City Park	✓	✓	✓	BBQ, Picnic Area, Playground, Trail
	George Stephan Center			✓	Basketball Courts
	Lawrence Moore Park		✓	✓	Playground, Trail
	Oak Creek Park		✓		BBQ, Picnic Area, Trail
	Paso Robles Golf Club		✓	✓	Golf Course, Food
5	Pioneer Park				Baseball Diamonds, Basketball Courts, BBQ, Picnic Area, Playground, Skatepark
	Robbins Field	✓	✓	✓	Baseball Diamonds
	Royal Oak Meadows Park				BBQ
	Sherwood Forest		✓	✓	Skatepark
	Sherwood Park		✓	✓	Baseball Diamonds, Basketball Courts, BBQ, Picnic Area, Playground, Soccer Fields, Tennis, Trail, Volleyball
	Turtle Creek Park				BBQ, Picnic Area, Trail
6	Mandella Park				No Amenities
	San Miguel Park	✓		✓	Baseball Diamond, BBQ, Horseshoes, Picnic Area, Playground, Swimming Pool, Tot Pool
	Rios Calendonía Adobe	✓	✓	✓	BBQ, Picnic Area

**Figure 2-2: Destinations**



### **Bethel Lutheran Church**

Located in Templeton off Crocker Street, Bethel Lutheran Church was constructed in 1891 of bricks made from local river bottom clay.

### **C.H. Phillips House**

Located off Main Street in Templeton, the C.H. Phillips House was built in 1886 as the home of the founder of Templeton.

### **Mission San Miguel**

Located at South Mission Street in San Miguel, Mission San Miguel was founded in 1797 by Father Fermin Francisco de Lausen. Throughout its history, the mission ministered local Indians. It remains an active parish with a museum and gift shop.

### **Rios Caledonia Adobe and Museum**

Located on South Mission Street in San Miguel, the Rios Caledonia Adobe was built in 1835 by local Indians and over time has been used as a residence, post office, mattress making shop and school. A museum and gift shop were opened in 1978. Restoration and maintenance efforts are supported by the Friends of the Abobes, Inc. and the County of San Luis Obispo Parks and Recreation Department.

### **Other Recreation**

Informal OHV areas exist throughout the SRT area, particularly around the vicinity of San Miguel and along the Highway 101 corridor. Accessing the riverbed is increasingly popular at an informal and unregulated area behind Firestone Walker Brewery in Paso Robles. The nearest official designated area is the Pozo La Panza OHV Area, located 17 miles east of Santa Margarita in the Los Padres National Forest.

### **Los Padres National Forest**

Located in central California, the Los Padres National Forest extends from Ventura to Monterey counties with an elevation range from sea level to 8,847 feet. It is accessible in northern San Luis Obispo County from Highway 58 East in Santa Margarita and Highway 41 West in Atascadero.

## **2.2 Public Lands and Access Easements**

Public agency owned properties offer potential opportunities for proposed trail alignments. Much of the study area is managed by local communities, the Union Pacific Railroad, Caltrans, Department of State Hospitals (DSH) and the Atascadero Mutual Water Company (AMWC). To the extent feasible, the SRT alignment will utilize public lands and access easements. Public agencies, such as water districts and local jurisdictions, are generally able to accommodate public trail use on their lands and typically have processes in place to construct, manage and operate trail systems. The public agency properties found in the general study area include the following:

- United States of America
- State of California
- County of San Luis Obispo
- City of Atascadero
- Atascadero Cemetery District
- Atascadero Unified School District
- City of Paso Robles
- Paso Robles Cemetery District
- Paso Robles Joint Unified School District
- Santa Margarita Cemetery District
- Santa Margarita Fire District
- Garden Farms County Water District
- Templeton Community Services District
- Templeton Unified School District
- San Miguel Community Services District
- San Miguel Elementary School District

### **2.2.1 Existing Trails and Public Access Easements**

Trails within the study area encompass a wide range of conditions built by a diverse set of managing agencies. Informal trails also exist both on public lands and private lands.

Within the SRT study area, Atascadero and Paso Robles contain the majority of the existing trail systems adjacent to the Salinas River. The following sections describe the more formally improved facilities, moving from south to north, that have been or may be, designated as a part of the SRT. Table 2-3 and Figures 2-3 through 2-8 provide an overview of the potential trail segments and the following descriptions provide more detailed information about existing sections.



**Table 2-3: Existing Trails**

Reach	Map #	Trail System	Miles	Use	Surface	Location	Signage	Parking
1	1	Las Lomas North	3.75	Pedestrian	Firm Surface	Halcon Rd	Yes	Street
	20	Rocky Canyon Road Proposed	2.1	Ped & Equine	Firm Surface	Rocky Canyon Rd.	NA	NA
	21	SM Pride Suggested Calf Canyon	9.2	Ped & Equine	Firm Surface	W. Pozoa/Calf Can.	NA	NA
	22	SM Pride Suggested Local Loop	0.4	Ped & Bike	Concrete/Asphalt	Encina / H St.	NA	NA
2	2	Jim Green Trail	1.53	Ped & Equine	Firm Surface	Cortez Ave	Yes	Lot
	3	Anza South Trail	1.7	Ped & Equine	Firm Surface	Gabarda Rd	Yes	Street
	4	Stadium Park Trails	2.0	Ped & Equine	Soft Surface	Capistrano Ave	Yes	Small Lot
	5	de Anza Central Trail	1.0	Ped & Equine	Firm Surface	Sycamore Rd	Yes	Street
3	6	de Anza North Trail	6.0	Ped & Equine	Firm Surface	Salinas River	Yes	Street
	7	Ferrocarril Rail Trail	0.9	Ped & Equine	Firm Surface	Traffic Way	No	Lot
	8	Ferrocarril Internal Trails	2.86	Ped & Equine	Asphalt/Unimp	N Ferrocarril Rd	Yes	Street
	9	de Anza Graves Creek Bikeway	1.6	Ped & Equine	Asphalt/Unimp	Salinas River	Yes	Street
	10	de Anza Casa Rio Bikeway	0.2	Ped & Equine	Asphalt	N Ferrocarril Rd	Yes	Street
4	11	Lawrence Moore Park Trails	0.43	Ped & Bike	Asphalt	River Walk	Yes	Street
	12	Salinas Parkway	1.7	Ped & Bike	Asphalt/Unimp	Riverbank Ln	Yes	Street
	13	S. River Road to Salinas Park	0.1578	Ped & Bike	Asphalt/Concrete	S River Rd	Yes	Street
	14	Mohawk to Parkway Connector	0.2703	Pedestrian	Asphalt	Mohawk	Yes	Street
	15	Charolais Corridor	0.36	Ped & Bike	Concrete	Charolais Rd	Yes	Street
	16	Charolais to Mohawk Loop	4.6		Asphalt/Unimp	Mohawk	No	Street
	17	Rombouillet Canyon	1.28		Asphalt/Unimp	Rombouillet Rd	No	Street
	18	Centennial Park Trail	0.92		Asphalt	Nickerson	Yes	Lot
	19	Union Road Trail	1.07		Concrete/Asphalt	Union Rd	No	Street
5	No existing public trails within these reaches							
6								

## Existing Trails

### Las Lomas (Paloma) Trail

The Las Lomas North Trail is located within Atascadero off Halcon Road. It is one section of an overall trail system for the Las Lomas Paloma Development. It is a natural surface trail system for pedestrian and equine use with trailhead signage. Parking is not available directly at the trailhead and is limited to Paloma Creek Park and along Calle Milano. A vista point on the south side provides a stunning 360 degree view of the Salinas River Valley.

### Jim Green Trail

This is actually a series of trails that run up the hillside north of Heilmann Park and the Chalk Mountain Golf Course. Access is provided at a trail head located at the end of Cortez Avenue. The trails are used by hikers, runners and equestrian users. Total trail length is 1.53 miles.

### Anza South Trail

The Juan de Bautista de Anza South Trail is located within Atascadero on the City's wastewater treatment plant property off Gabarda Road. This trail is part of the official Juan de Bautista de Anza historical trail corridor. It is a natural surface trail system for pedestrian and equine use with trailhead signage. This trail system is directly adjacent to the Salinas River and parking is limited to on-street at the trailhead.

### Stadium Park Trails

A broad variety of trails exist in Atascadero's Stadium Park, with some within close proximity to the Salinas River Trail system. The trails total about two miles and wind through hillsides covered in oak woodland. Very far reaching views exist off of the south sides of the hills, while views to the north are often blocked by heavy oak woodland tree canopies.

### Anza Central Trail

The Juan de Bautista de Anza AMWC Trail is located within Atascadero on property owned by the Atascadero Mutual Water Company. This trail is part of the official Juan de Bautista de Anza historical trail corridor. It is a natural surface trail system for pedestrian and equine use with trailhead signage. This trail system is directly adjacent to the Salinas River and parking is limited to on-street parking at the trailhead.

### Anza North Trail

The Juan de Bautista de Anza North Trail is located within Atascadero on property owned by the Atascadero Mutual Water Company. This trail is part of the official Juan de Bautista de Anza historical trail corridor. It is a natural surface trail system for pedestrian and equine use with trailhead signage. This trail system is directly adjacent to the Salinas River and parking is limited to on-street at the trailhead.

### **Ferrocarril Rail Trail**

This trail is located within Atascadero on property owned by De Anza Estates, LLC and runs parallel to the Union Pacific Railroad. The trail surface conditions transition from poorly maintained asphalt to dirt. Pedestrian and equestrian users have access to this trail. This trail offers limited parking, but does not have adequate trailhead signage.

### **Ferrocarril Internal Trail System**

A variety of on-road or near-road trail systems exist through the property owned by De Anza Estates, LLC. The trail surfaces are mostly paved, some paralleling Ferrocarril Road and others leading to the Anza North trails.

### **Anza Graves Creek Bikeway Trail**

The Juan de Bautista de Anza Bike Trail is located within Atascadero on property owned by Graves Creek Estates, LLC. The trail surface is asphalt, but there are signs it is not regularly maintained. Parking is limited to on-street and this trail does not have adequate trailhead signage. A segment of this trail crosses under the railroad track and up a hill towards the Ramon interchange.

### **Anza Casa Rio Bikeway Trail**

This trail is located within Atascadero on property owned by Casa Rio, LLC. The trail surface is asphalt. This segment dead ends at the northern edge of the development, just south of the creek and water treatment ponds.

### **Lawrence Moore Park Trails**

This looped pathway circumnavigates Lawrence Moore Park and contains a variety of interpretive signs, viewpoints and natural vegetated areas.

### **Salinas Parkway Trail**

The Salinas Parkway Trail is located within Paso Robles on property owned by the City. The trail surface conditions transition from dirt to asphalt and concrete. This trail is considered a Class I multi-use pathway and is directly adjacent to the Salinas River with on-street parking at the trailhead.

### **South River Road Trail**

The South River Road Trail is located within Paso Robles on property owned by the City. The trail surface conditions are concrete and the trail is located directly adjacent to the Salinas River with on-street parking at the trailhead. This is a Class I multi-use pathway with educational signage and decorative planting along its length.

### **Mohawk to Parkway Connector**

This short connector trail connects the trail at the end of Mohawk with the Salinas Parkway Trail.

### **Charolais Corridor Trail**

This section is located on property owned by the City and was constructed in 2012. This trail is a Class I multi-use pathway with educational signage and decorative planting along its length.

### **Charolais to Mohawk Loop Trail**

Located mostly along Charolais, Creston and Alamo Creek, this trail is both roadside and in extensive canyon areas, offering unique views and access to creeks and oak woodlands.

### **Rombouillet Canyon**

Located mostly along Charolais, Creston and Alamo Creek, this trail is both roadside and in extensive canyon areas, offering unique views and access to creeks and oak woodlands.

### **Centennial Park Trail**

Though associated with Centennial Park, this trail connects a variety of canyons and open space areas around the park.

### **Union Road Trail**

This paved near-street facility parallels a significant portion of Union Road.

### **Public Access Easements**

Based on information provided by the County of San Luis Obispo Parks and Recreation Department, there are a few properties through which the County is working to obtain public trail easements. Table 2-4 lists the public access easements in the study area. Many of these have been shown on Figures 2-3 through 2-8.

**Table 2-4: Public Access Easements**

Reach	Location	Easement Type	Width	San Luis Obispo County Status
1	Maria Avenue	Pedestrian Trail	10	Existing Trail Easement
	APN 070-111-037	Ped/Equine/Bike	10, 25, 30, 50	Ready to be Accepted Trail Offer
	APN 070-121-028	Pedestrian Trail	10	Ready to be Accepted Trail Offer
	APN 070-091-036	Pedestrian Trail	NA	Trail Offer in Process
2	No public access easements found within this reach			
3	The Vineyards Development	Ped & Equine	6, 25, 60	Accepted Trail Offer
	APN 039-221-021	Ped & Equine	25	Accepted Trail Offer
	Rossi Road	Pedestrian Trail	NA	Accepted Trail Offer
	APN 049-045-012 & 019 & 020	Ped & Bike	20	Existing Trail Easement
	APN 039-271-058	Ped & Equine	20 & 25	Ready to be Accepted Trail Offer
	APN 039-271-058	Ped & Equine	25	Ready to be Accepted Trail Offer
	APN 039-281-055 & 056	Pedestrian Trail	10	Ready to be Accepted Trail Offer
	APN 039-231-011 & 012 & 013	Pedestrian Trail	25	Ready to be Accepted Trail Offer
	APN 034-011-017 & 018	Pedestrian Trail	50	Ready to be Accepted Trail Offer
	APN 039-261-043 & 046	Private Access	25	Ready to be Accepted Trail Offer
4	APN 020-282-010 & 002	Pedestrian Trail	25 & 100	Ready to be Accepted Trail Offer
5	No public access easements found within this reach			
6	APN 021-151-045	Ped & Equine	NA	Ready to be Accepted Trail Offer
	APN 021-157-042	Pedestrian Trail	10	Ready to be Accepted Trail Offer

### 2.2.2 Potential Connecting Trails

Trails adjacent to the study area may provide opportunities to connect to destinations in adjacent communities. In addition to the existing trail systems that may be incorporated into the SRT system, there are several other existing trail systems not directly adjacent to the Salinas River, but could serve as possible connectors throughout the study area communities. Many of the proposed trail corridors in the region have been proposed by the County of San Luis Obispo. As part of Paso Robles and Atascadero's bicycle master plans, a variety of

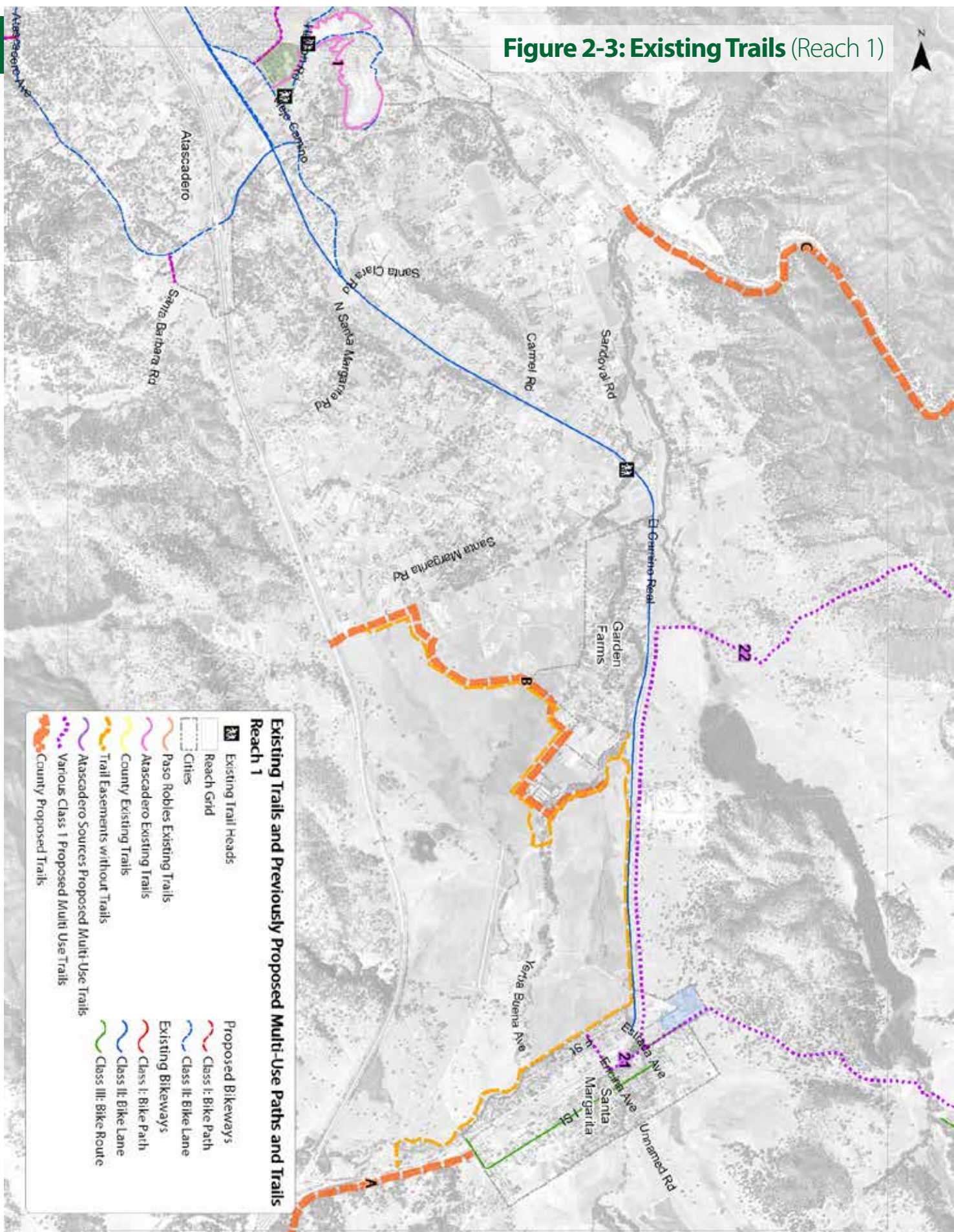
Class 1 multi-use trails were identified that could also serve as connectors. Finally, a number of trail easements have already been identified in the study area and are very high candidates for trail development. These easements are shown on the following maps and were discussed in the preceding section and shown on Table 2-4. Table 2-5 describes these potential trail connectors and Figures 2-3 through 2-8 identifies the locations of these existing trails throughout the SRT study area.

**Table 2-5: Connecting Trails**

Reach	Trail System	Miles	Use	Surface	Location
1	Proposed SM Proud Connecting Trail	0.4	Ped & Bike	Proposed Paved	Encina / H Street in SM
	Proposed SM Proud Calf Canyon Loop	9.2	Ped & Bike	Proposed Firm Surface	W. Pozo / Calf Canyon
	Proposed Rocky Canyon Connector to S.River	2.0	Ped & Bike	Proposed Firm Surface	Rocky Canyon Rd.
	Las Lomas Trail	1.1	Pedestrian	Unimproved	Halcon Rd
2	ALPS Trail	0.3	Pedestrian	Unimproved	Mercedes Ave
	Blue Oak Trail	0.4	Pedestrian	Unimproved	Pinal Ave
	Jim Green Trail	1.5	Pedestrian	Unimproved	Cortez Ave
	Mackey Trail	0.2	Pedestrian	Unimproved	Mercedes Ave
	Pine Mountain Loop Trail	0.8	Pedestrian	Unimproved	Pinal Ave
	Stadium Park Trail	0.4	Pedestrian	Unimproved	Mercedes Ave
	Lake Pavilion Loop Trail (private/ dropped)	0.2	Ped & Bike	Asphalt	Santa Rosa Rd
	Atascadero Lake Trail	1.2	Ped & Bike	Asphalt	Santa Rosa Rd
	No public existing trails within this reach				
	Almendra Court Trail	0.2	Ped & Bike	Asphalt	Crown Way
4	Barney Schwartz Park Loop	0.9	Ped & Bike	Asphalt/Concrete	Union Rd
	Centennial Park Trail	0.9	Ped & Bike	Asphalt	Nickerson Dr
	Charolais Corridor Trail	1.4	Ped & Bike	Concrete	Charolais Rd
	City Park Loop	0.4	Ped & Bike	Concrete	Spring St
	Navajo sidewalk	0.3	Ped & Bike	Concrete	Navajo Ave
	Royal Oak Meadows Trail	0.2	Ped & Bike	Asphalt	Parkview Ln
	Sherwood Forest Loop	1.0	Ped & Bike	Asphalt/Con/Unimp	Scott St
	Snead/Rambouillet Trail	1.3	Ped & Bike	Asphalt/Unimproved	Rambouillet Rd
	Turtle Creek Loop	0.9	Ped & Bike	Asphalt/Con/Unimp	Brookhill Dr
	Union Road Trail	1.3	Ped & Bike	Asphalt/Concrete	Union Rd
	Water Tank Loop	2.0	Ped & Bike	Concrete	Golden Hill Rd
5	No existing public trails within these reaches				
6					

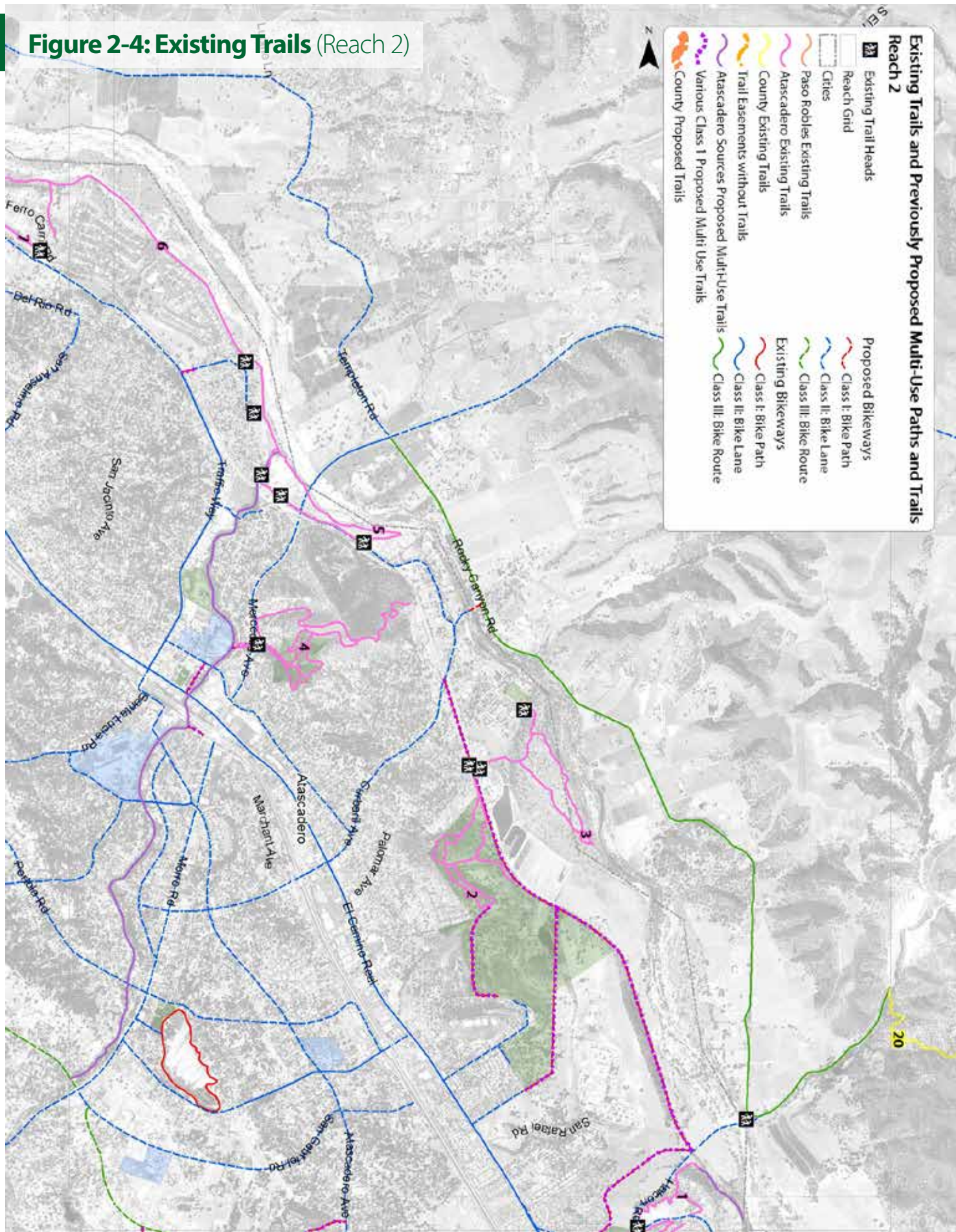


Figure 2-3: Existing Trails (Reach 1)



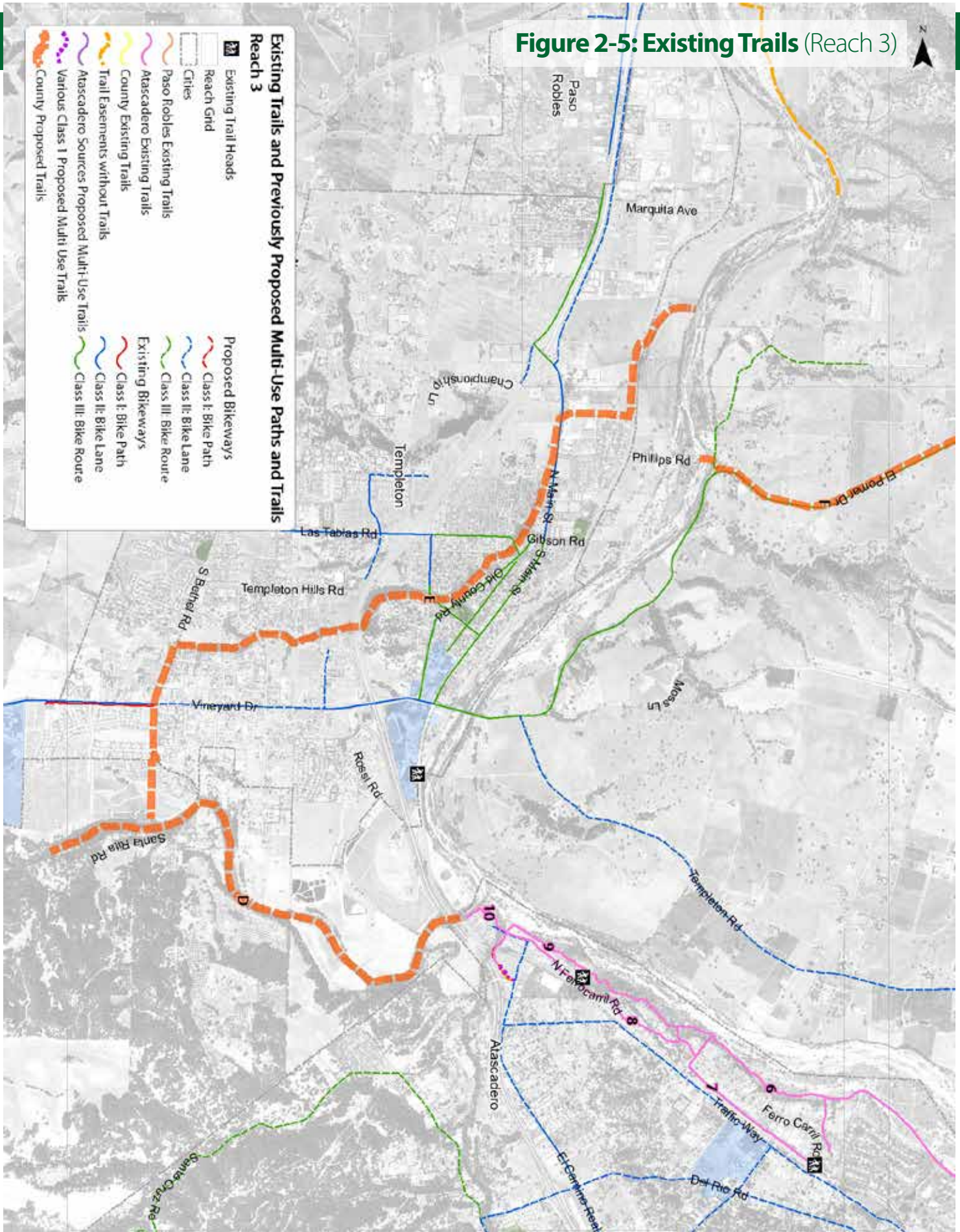


### Figure 2-4: Existing Trails (Reach 2)



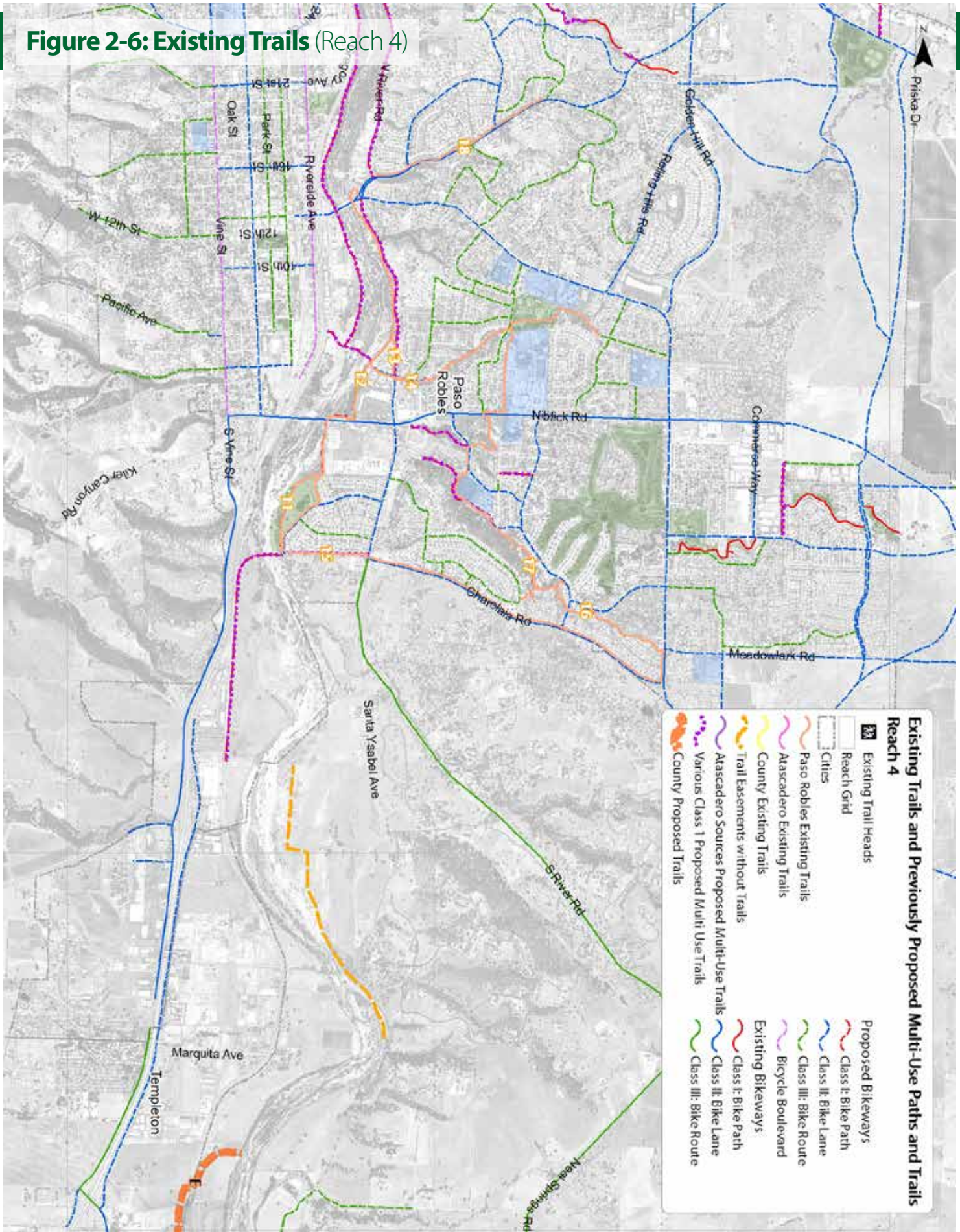


**Figure 2-5: Existing Trails (Reach 3)**



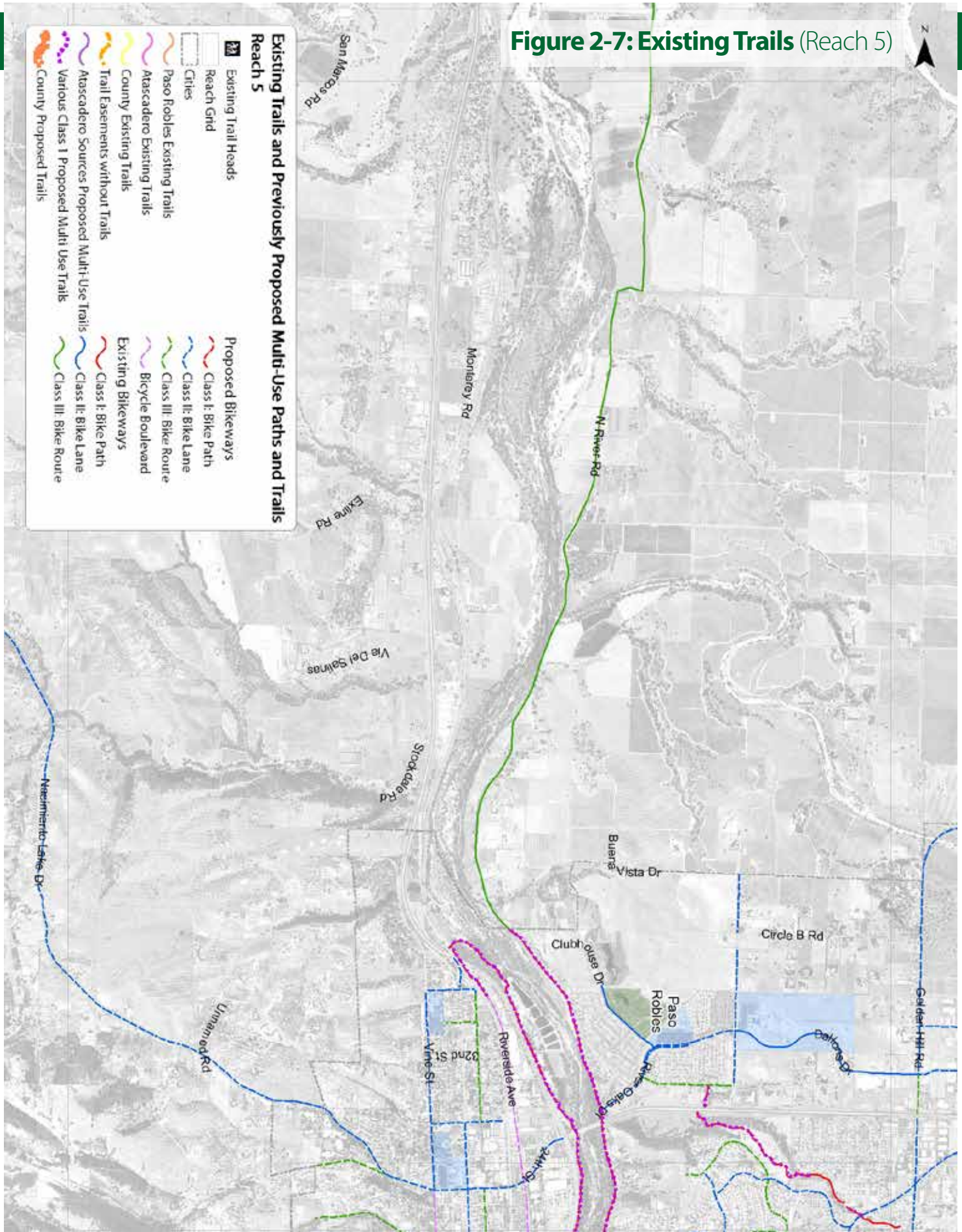


**Figure 2-6: Existing Trails (Reach 4)**

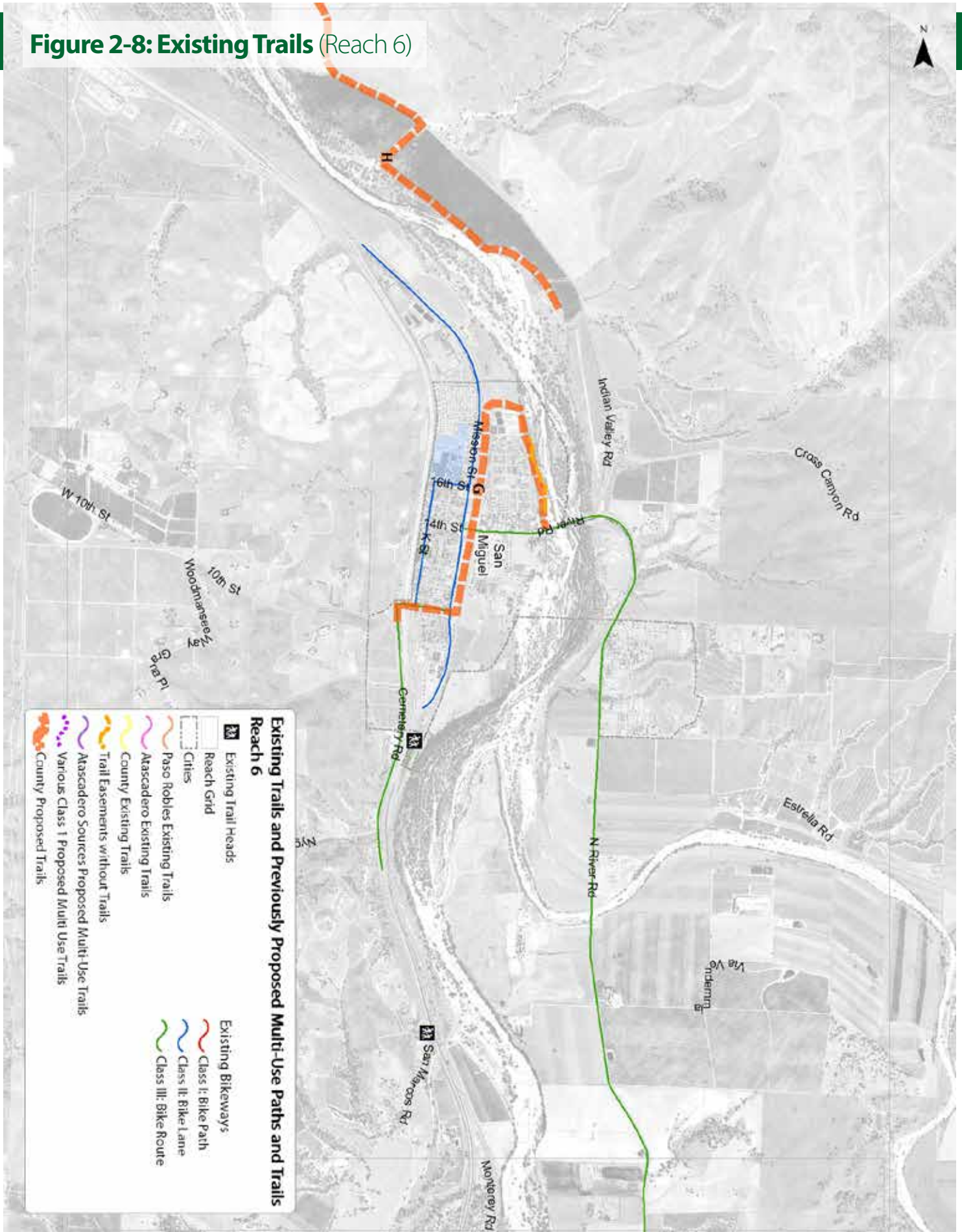




**Figure 2-7: Existing Trails (Reach 5)**



**Figure 2-8: Existing Trails (Reach 6)**





## 2.3 Existing and Planned Bicycle Facilities

The study area is under the jurisdiction of the San Luis Obispo County Bikeways Plan, updated most recently in 2010. A list of on-street bicycle facilities in the study area is shown in Table 2-6 and existing and planned bikeways are shown on Figures 2-3 through 2-8.

The Caltrans *Highway Design Manual* standards call for an eight foot shoulder on all designated highways where feasible. This provides a vehicle breakdown lane, but also accommodates cyclists. Where highway improvements are being implemented, Caltrans' policy is that this eight foot shoulder standard shall be met unless an exception to standards is justified by specific conditions and review process. If a project to provide more room for cyclists, or any other significant improvement, is undertaken, Caltrans standards require the project to provide eight foot shoulders or demonstrate why eight feet is not feasible. In any case, bikeways are more likely to be proposed for arterial or smaller roadways, which have less stringent restrictions than designated highways.

## 2.4 Environmental Resources

This section analyzes existing environmental resources within the study area. Appendix E contains a detailed analysis of agricultural, biological and cultural resources, as well as potential geologic hazards. Environmental constraints, when coupled with the economic and engineering constraints as described in other sections, are intended to provide a basis for consensus among project stakeholders regarding the preferred alignment.

The study area encompasses nearly 31 linear miles of the Salinas River channel, with inflows from several tributaries. The river varies from a predominantly dry sandy riverbed during much of the year, to a shallow northbound river during wet winter and spring months.

The characteristics of the river channel and its banks vary greatly throughout the length of the study area. Some sections of the study area are characterized by narrow, defined river channels lined with riparian woodland and inhabited by both aquatic and non-aquatic wildlife. Other areas are defined by broad floodplains, with braided channels running through open sandy areas, and hummocks anchored by riparian vegetation, particularly willows. In addition, there are in-holdings for sand and gravel mining, as well as material storage. Finally, some areas have been heavily degraded by recreational OHV use.

Typically, the river's surface flow is shallow and occurs only during the winter and spring of wet years. The water flows below the surface, in underground aquifers, for the remainder of the year. The average maximum annual peak flow in the study area is approximately 6,000 cubic feet per second, but during the 1995 flood, it more than quadrupled to 28,000 cubic feet per second as measured at the 13th Street Bridge.

### 2.4.1 Agricultural Resources

The study area is primarily agricultural. Primary crops grown in the study area include cattle, cattle feed and wine grapes. Approximately 51 percent of the project study area is zoned for agriculture use. This ranges up to 10,372 acres in Reach 6, for example. Total agricultural acreage as of 2012 was 72,222 acres for the entire study area.

### Important Agricultural Soils

Soil characteristics are critical for agriculture. Soils, coupled with climatic conditions and the availability of water, largely determine whether agriculture is feasible and, if so, what type. Soils with high agricultural potential are typically used for vegetables, seed crops, orchards, and other irrigated specialty crops and irrigated field crops. On the other hand, some soils and landforms have severe limitations that nearly preclude their use for commercial crop production. Even so, some grazing occurs on such lands.

County policy discourages the conversion of highly productive soils to other uses or loss of these soils through erosion or other disturbances. Trail projects can result in direct conversion of soils, but also indirectly as a result of loss of soils if they are located in such a way that leaves agricultural production infeasible. For example, a trail that bisects a large parcel by splitting off a small piece converts it into an "orphaned parcel" unusable for continued farming.

### Agricultural Improvements

Agricultural operations that include improvements such as agricultural roads, barns, storage systems, fruit trees, and drainage or irrigation systems, are more likely to be able to support agriculture in the long-term because they are established and the need for capital investment is lower than on sites without them. Based on a field survey and use of aerial photos, there are a significant number of barns and other agricultural accessory structures within the study area, especially in the northern half. Agricultural roads are relatively common in the study area. In fact, a number of existing railroad crossings provide the sole access to farms and ranches between the rail line and the Salinas River, especially north of Paso Robles.



### Agricultural Land Use Incompatibilities

The predominant rural nature of the project study area probably results in few existing land use incompatibilities. Tourism occurs within the study area and tourists can unintentionally affect agricultural operations by disturbing livestock or trespassing. However, because most recreational and tourist activities are focused around the more urbanized areas, conflicts may be kept to a minimum with appropriate measures.

#### 2.4.2 Biological Resources

Numerous aquatic features intersect the study area and may potentially come under the jurisdiction of the US Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB). In addition, there are adjacent suitable habitat within the study area for several special-status plants and animals. As a result, biological resources will likely present some constraints for SRT development. A summary of the biological documentation and permitting that will likely be required is provided below.

#### Wetlands Delineation and Other Waters of the United States

Jurisdictional delineations utilize standardized methods to identify wetlands and other water features that may be considered within the jurisdiction of the USACE. The USACE has jurisdiction over a variety of water features including wetlands (e.g., vernal pools, marshes, seasonal wetlands), as well as other waters of the US (WoUS) (e.g., drainages, creeks, streams, navigable waters, tidal area). The USACE has provided guidance on the characteristics that wetlands and other WoUS must have to be determined within their jurisdiction.

Guidance on the identifying wetlands and other WoUS under Corps jurisdiction is provided in the 1987 *Corps Delineation Manual*, the 2008 *Regional Supplement* to the Corps of Engineers *Wetland Delineation Manual: Arid West Region (Version 2.0)*, *Corps' A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western US*, and 2007 *Corps Jurisdictional Determination Form Instructional Guidebook*. The methodologies outlined in these reference documents should be utilized to delineate the extent and location of jurisdictional features within the project study area and submitted to the USACE for verification.

### California Red-legged Frog Habitat Assessment

A Habitat Assessment Report may be required due to the presence of known occurrences for California red-legged frog (CRF) in the vicinity of the project study area. This report should be prepared in accordance with the US Fish and Wildlife Service (USFWS) August 2005 *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog*. An evaluation of current information on California red-legged frog (CRF) should be combined with an assessment of suitability of habitats within the project study area and presented in the report for submittal to the USFWS and CDFW to facilitate a determination on the likelihood of the presence of CRF.

#### Natural Environment Study Report (NES)

The preparation of the Natural Environment Study (NES) document will satisfy Caltrans requirements, as well as provide the necessary information for the preparation of the CEQA/NEPA environmental document and permitting.

#### Biological Assessment (BA)

Section 7(a)(2) of the Endangered Species Act requires federal agencies to consult with the USFWS, to ensure that the activities they authorize, fund, or carry out do not jeopardize the continued existence of federally protected species or their critical habitats. Caltrans acts on behalf of the Federal Highway Administration (FHWA) under NEPA delegation and, therefore, must consult with the USFWS when an action may result in impacts to proposed, threatened, or endangered species.

The potential exists for federally listed species to occur in the project vicinity. If suitable habitat and/or individuals of these species are found to have the potential to be impacted by the proposed project, then a biological assessment (BA) required for Caltrans to use during the consultation process with the USFWS.

#### Permitting

Due to the presence of numerous aquatic features within the project study area, it is likely that impacts to one or more of these features will occur as a result of project implementation. As a result, the following permits will likely need to be obtained prior to project implementation.

#### 404 Permitting

A federal permit will need to be obtained prior to project implementation if any discharge of dredge or fill materials into WoUS will result from project activities.

## 401 Certification

Section 401 of the Clean Water Act (CWA) requires that any federal permit that authorizes the discharge of dredge or fill material into WoUS obtain certification from a state agency stating that the proposed activities comply with this regulation. The State of California has tendered their authority for this program to the Regional Water Quality Control Boards.

## 1602 Lake and Streambed Alteration Agreement

Section 1600-1603 of the California Fish and Game Code requires any person, state or local governmental agency, or public utility to notify the DFW before beginning an activity that will substantially modify a river, stream or lake. If DFW determines that the activity could substantially adversely affect an existing fish and wildlife resource, a Notification of Lake or Streambed Alteration Agreement (Notification) is required.

## 2.4.3 Cultural Resources

Cultural resources may present constraints on the development of the SRT since sites occur within the study area. Mitigating impacts to cultural resource sites can be time-consuming and costly. It is therefore recommended that the trail alignment avoid such sites whenever possible. A list of documentation required for cultural resource impacts includes the following:

### Archaeological Survey Report (ASR)

The identification phase for cultural resources studies typically involves conducting a records search, consultation with Native Americans, conducting an archaeological field survey of the project Area of Potential Effects (APE), and documenting the results of the survey (both prehistoric and historical archaeological properties) in an Archaeological Survey Report (ASR).

### Historic Resources Evaluation Report (HRER)

An HRER documents evaluations of historical archaeological resources. The HRER is also used to evaluate built-environment resources (structures such as bridges, residences, barns, levees, dams, etc.).

### Historic Properties Survey Report (HPSR)

The HPSR is the summary document that Caltrans uses as its consultation and decision-making document. Caltrans refers to the HPSR when requesting State Historic Preservation Office's (SHPO) concurrence on determinations of eligibility or ineligibility for properties that were evaluated as part of the project. It is considered an "umbrella document" that incorporates information from the ASR and HRER.

## 2.4.4 Geologic Conditions

Potential geologic conditions discussed in this section include slope instability, erosion and sedimentation as they may apply to master plan trail project development.

The County has identified as a Geologically Sensitive Areas (GSAs) that address these concerns, where permit applications need to be accompanied by a report prepared by a certified engineering geologist or registered civil engineer. Trail projects located in these areas are likely to be subject to more intensive engineering requirements and possibly have higher long-term maintenance costs due to adjacent slope sloughing onto the trail surface. The identification of site specific geologic hazards and constraints will need to be accomplished at the next stage of this planning effort, when detailed design, engineering and environmental review will be conducted. The topic areas of concern that will need to be further investigated include the following:

### Faulting/Seismicity

The study area is subject to seismic activity due to its proximity to faults. A strong earthquake (now known as the San Simeon earthquake) originated in the Oceanic fault zone about 25 miles northwest of Paso Robles in late 2003, and the San Andreas fault lies roughly parallel to the study area approximately 28 miles to the east. Seismic activity can cause liquefaction, potentially damaging property, roads and infrastructure, including trails and bikeways. If new bridges are built in susceptible conditions, for example, liquefaction could cause soil settlement and lateral spreading under their abutments, potentially leading to failure.

### Landslides and Liquefaction

Landslide and liquefaction risk are moderate constraints along much of the study area. The highest landslide risk occurs where the topography is marked by steep slopes and loose soils, such as areas within Atascadero, where bluffs along the west bank form an escarpment. High potential areas for landslide occur in all reaches, with even very small areas of very high potential in Reach 1.

Landslide risk affects more of the study area than liquefaction risk, with high potential affecting a range of 0.1 to 10.3 percent of individual reaches, with Reach 1 having the lowest level and Reach 6 having the highest. Overall, the reach lands average about 75 percent in the low landslide potential category.





Erosion and Sedimentation

Possible erosion issues occur within the study area due to localized soil, riverbed and adjacent slope conditions. Trail construction and use can impact adjacent lands and associated vegetation removal or changes to localized drainage patterns can exacerbate erosion. Heavy use of unauthorized trails at river bluff edges can increase erosion of adjacent soils and the bluff itself. However, erosion associated with unauthorized, poorly maintained or heavily used trails also present opportunities for restoration, education, volunteer involvement and improved trail design.

2.5 Economic Resources

This section describes existing user demographics, economic trends, amenities and services in the study area. As described earlier, the study area for the Salinas River Trail is defined as the river valley between San Miguel and Santa Margarita to the south, a distance of approximately 35 miles.

2.5.1 Economic and Demographic Trends

Recent economic growth has occurred along the Salinas River, causing changes in area character and appearance. The region’s primary economic base includes agriculture, manufacturing, commercial, professional services and tourism. This growth has reaped benefits for the region, providing jobs and revitalizing communities, creating greater economic and cultural diversity.

Overview of County and Cities/Community Population Projections in Study Area

California’s population is projected to grow 25 percent over the next 20 years meaning that, at this pace, there will be 49.2 million more Californians by 2030. This translates to approximately 500,000 new residents per year. This statistic suggests the potential for a growing market for tourist-serving amenities (See Tables 2-6 and 2-7).

Table 2-6: Existing Population

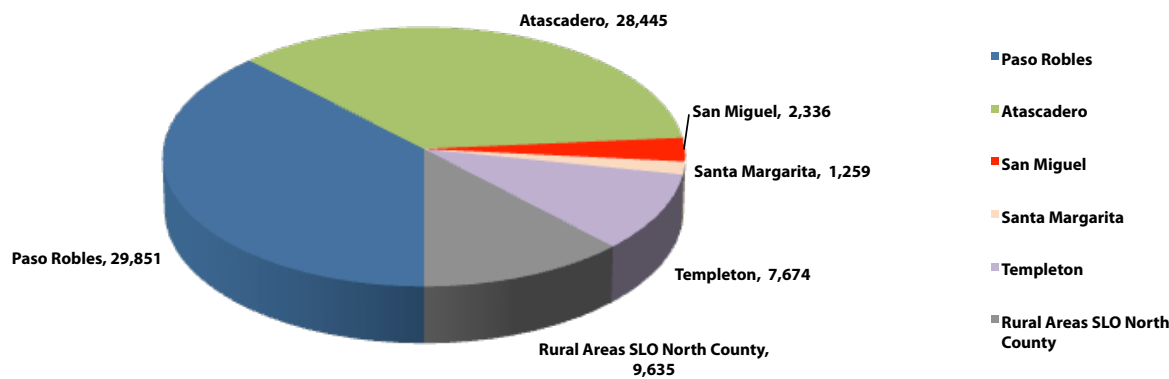
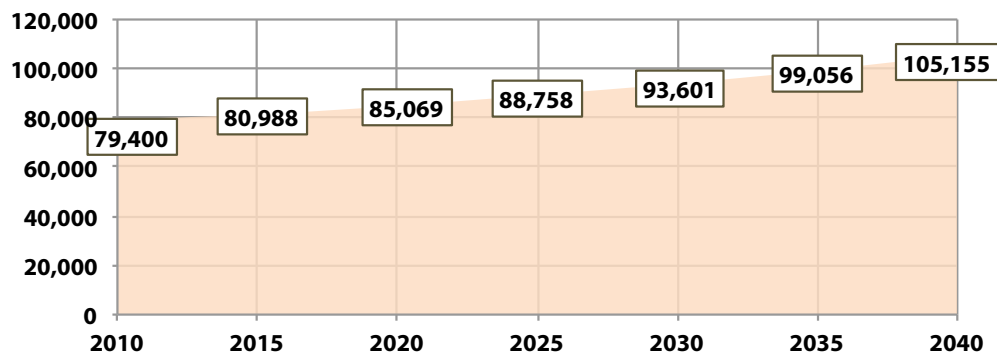


Table 2-7: Salinas River Planning Area Population Projections



The 2010 population in the Salinas River Planning Area was estimated to be 79,200. The County projects that 91,872 people could be living in the planning area by 2030, a projected population increase of 16 percent in those 20 years.

### Overview of Regional Recreational Growth

In 2012, 49.4 percent of Americans participated in some form of outdoor recreation, the highest ever recorded, thanks primarily to population growth. In all, nearly 142 million people enjoyed outdoor recreation, up about 800,000, since 2011. Expected uses include walking for fitness, horseback riding, backpacking, cycling (BMX, mountain/non-paved surface, on-road/paved surface), bird-watching, hiking, running/jogging, skateboarding, trail running and wildlife viewing. Typical outdoor activity participation rates can be applied to the local population to predict facility use (See Table 2-8).

**Table 2-8: Local Participation in Outdoor Activities**

Activity	National		Salinas River Plan. Area	
	2012 in 000's	% of Pop.	Pop. 2010 <b>79,200</b>	Pop. 2030 <b>93,601</b>
Walking for Fitness	116,695	40.60%	32,155	38,002
Horseback Riding	7,985	2.80%	2,218	2,621
Adventure Racing	2,170	0.8%	634	749
Backpacking (overnight)	8,771	3.1%	2,455	2,902
Bicycling (BMX)	2,175	0.8%	634	749
Bicycling (Mountain/Non-Paved)	7,714	2.7%	2,138	2,527
Bicycling (Road/Paved Surface, Mt./Non-Paved Surface, BMX)	42,336	14.7%	11,642	13,759
Bicycling (Road/Paved Surface)	39,232	13.7%	10,850	12,823
Birdwatching ( More than 1/4 Mile of Home/Vehicle)	14,275	5.0%	3,960	4,680
Boardsailing/Windsurfing*	1,593	0.6%	475	562
Camping (within 1/4 Mile of Vehicle/Home)	29,982	10.4%	8,237	9,735
Camping (Car, Backyard, or RV)	38,049	13.3%	10,534	12,449
Camping (Recreational)	15,108	5.3%	4,198	4,961
Hiking	34,545	12.0%	9,504	11,232
Hunting (All)	14,705	5.1%	4,039	4,774
Running (Running/Jogging or Trail)	53,214	18.5%	14,652	17,316
Running/Jogging	52,187	18.2%	14,414	17,035
Skateboarding	6,627	2.3%	1,822	2,153
Stand-Up Paddle Boarding*	1,542	0.5%	396	468
Trail Running	6,003	2.1%	1,663	1,966
Triathlon (Non-Traditional/Off Road)	1,442	0.5%	396	468
Triathlon (Traditional/Road)	2,184	0.8%	634	749
Wakeboarding*	3,348	1.2%	950	1,123
Wildlife (More than 1/4 Mile of Home/Vehicle)	22,999	8.0%	6,336	7,488

\*inserted for comparative purposes only

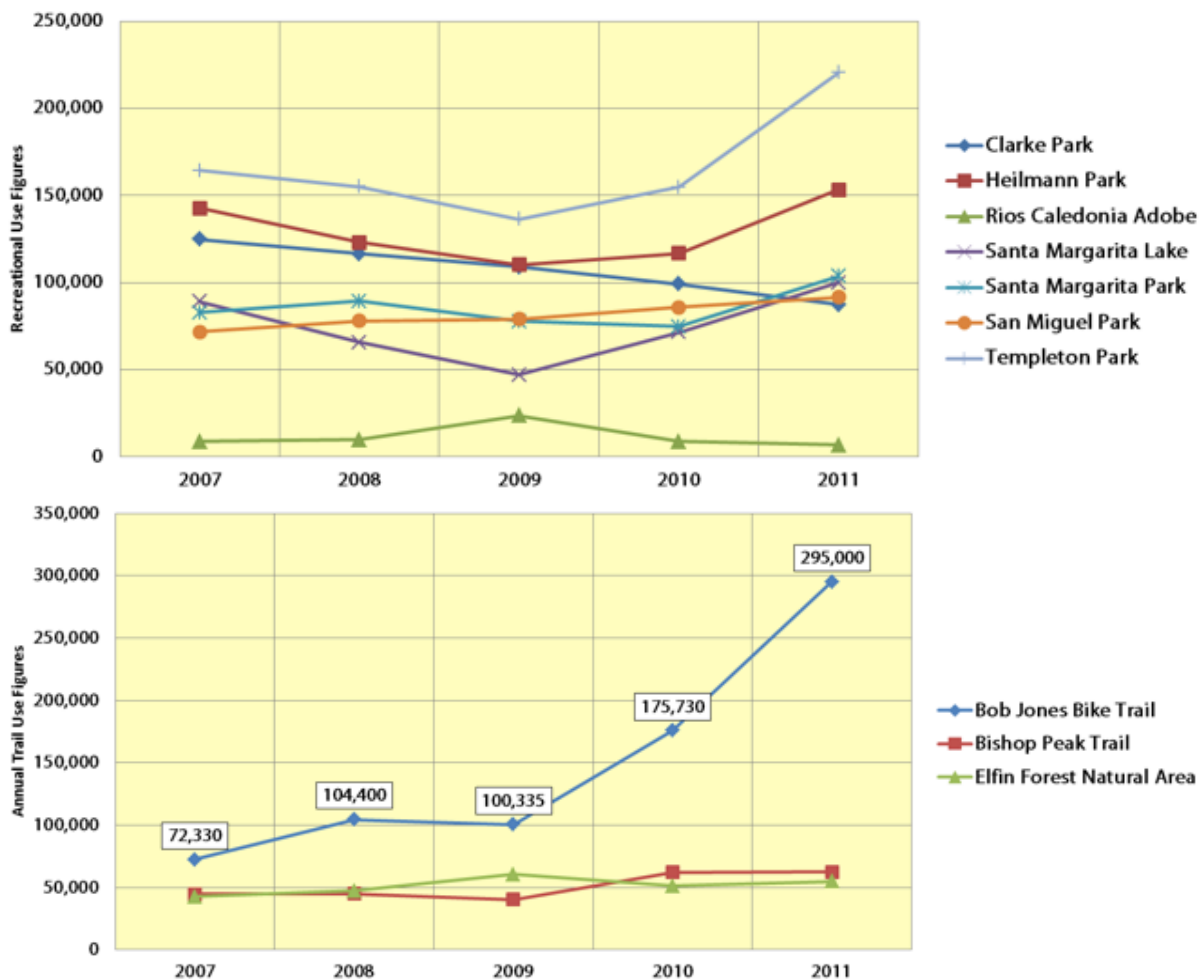


The Salinas River Planning area is home to a number of City and County maintained sports fields and parks. SLO County Parks collects user data on an annual basis to plan and program operations and maintenance. Recreational use data at nearby parks can be used as a baseline for appraising the existing activity level in the study area vicinity.

Seven parks are located within or near the study area: Clarke Park, Heilmann Park, Rios Caledonia Adobe, Santa Margarita Lake, Santa Margarita Park, San Miguel Park and Templeton Park. Over a five year period, average annual usage was approximately 90,000.

In addition to park and recreational areas user data, SLO County Parks also collects annual count data on a number of trails. Three trails were selected for comparison, the Bob Jones Trail, Bishops Peak Trail and Elfin Forest, offering a range of locations, varied level-of-service and different user experiences. From the data, the linear trails have a five year annual average use rate of 93,000.

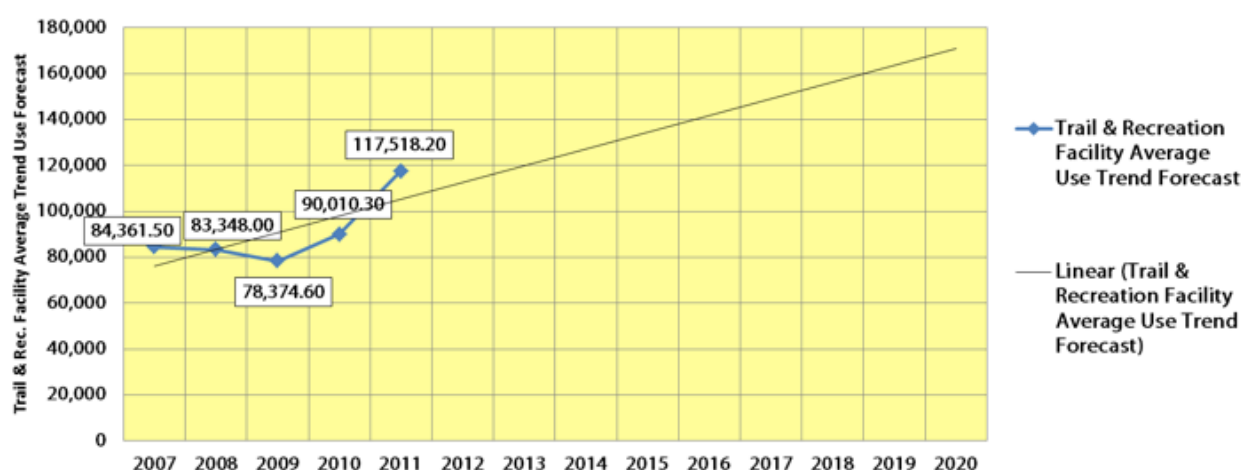
**Table 2-9: SLO County Parks and Trails Use Trends**





By combining the locations and user counts from the seven sample parks and recreational facilities and three trails across a five year period, it is possible to create a snapshot of a hypothetical single new recreational facility's annual usage rates. A trend line using linear regression for average annual use has been inserted into the accompanying diagram, Table 2-10. Given the user activity level reviewed in by the method, it is estimated that a new recreational trail along the Salinas River could experience 170,000 annual users by 2020.

**Table 2-10: New Trail Usage Projection**



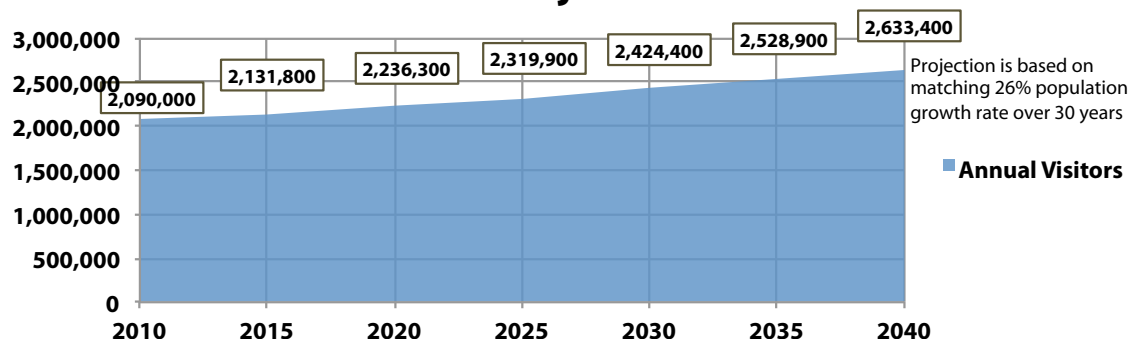
### Regional Tourism and Expected Growth

A number of tourists visit the study area each year and the study area is the gateway to the San Luis Obispo County wine country, one of the County's tourism focal points. The Paso Robles Chamber of Commerce estimates that approximately 6,700 visitors passed through the Visitor Center during the three month period of June, July and August 2013. Annual visitation data shows there are approximately two million annual visitors to the communities located within the Salinas River Planning Area.

Analysis of visitor spending provides a snapshot of the potential markets and market share that could be impacted by the development of a new public recreational resource. Further study would be required to determine specifically how these categories would benefit and to what extent future financial opportunities might exist.

Even so, the expected growth in annual visitors should at minimum trend in parallel with annual projected population growth. Table 2-11 begins with the 2010 estimate of 2,090,000 annual visitors and ends with a 2040 forecast of 2,633,400, an increase of just over 20 percent.

**Table 2-11: Annual Visitor Projection**





### 2.5.2 Services and Amenities

This section summarizes study area tourist-serving amenities, representing lodging, restaurants and cafes, grocery stores and restrooms. Tourist-serving amenities are primarily clustered in Paso Robles and Atascadero, with a handful located throughout the study area.

#### Lodging

There are approximately 36 hotels, motels and bed and breakfasts within the SRT study area.

#### Tent and Recreational Vehicle Camping

There is one formal campground and six RV camping locations in the study area.

- Paso Roble RV Ranch, Exline Road, Paso Robles
- Vines RV Resort, Wellsona Road, Paso Robles
- Pioneer Park, Paso Robles
- Keene RV Mobile Home Park, Spring Street, Paso Robles
- Sky River RV, Theater Drive, Paso Robles
- Hilltop Mobile & RV Park, Santa Cruz Road, Atascadero
- Circle M Mobile Village

#### Restaurants and Cafes

There are over 200 restaurants and cafes located throughout the SRT study area, with the concentration located within Atascadero and Paso Robles.

#### Grocery Stores and Shopping Centers

There are 20 grocery stores and 29 shopping centers within the SRT study area, with most located in Atascadero and Paso Robles.

#### Restrooms

There are 22 public restrooms within the SRT study area, with the majority located at public parks in each community within the study area. Restrooms at the various lodging, food and service providers are generally reserved for customers.

### Importance of Trail Amenities in Supporting Quality of Life, Transportation Choices, Health, Tourism and Local Retail Stability

Although quality of life is subjective and challenging to standardize across the built environment, several decades of scientific and health research on active and healthy lifestyles support the direct link personal health has with access to open spaces and community trail networks.

Because transportation choices are made on a near daily basis, conscientious decisions to travel, when possible, in a mode other than a single occupancy vehicle, such as walking or biking, are opportunities to achieve the U.S. Department of Health recommended minimum of 20 minutes of sustained

exercise three times per week to maintain a healthy heart, weight and to prevent the onset of chronic illnesses such as diabetes. Trail facilities that can be utilized as part of an individual's journey will encourage more frequent alternative travel choices and healthier lifestyle.

Parks, trail systems and open spaces are more frequently being cited for raising real estate values, particularly in urban environments where land is at a premium. Value increase to homes located within 1,500 feet of the following types of parks include the following:

- Natural areas: \$10,648
- Golf courses: \$8,849
- Specialty parks: \$5,657
- Urban parks: \$1,214

Source: National Trend, Active Living Research 2010

Additionally, with the rise of recreational or activity-based tourism, the consumer demand and visitor-driven response to market trends has been met with a massive increase in recreational product manufacturing and services. Destination travel with the purpose of undertaking a physical activity such as biking, trail running or backpacking has emerged as a leading recreational market trend. Travel for the sake of a sports tournament, triathlon or organized bicycle race or ride is also an emerging trend in the tourism marketplace of the communities in the Salinas River Planning Area.

As retail sales increase for recreational products and services, and as destinations with more to offer the outdoor enthusiast meet the demands of consumers, transactions increase, generating more spending and local income generation. There is also direct link between the duration in time a visitor spends in an area and the amount of money spent.

### Public Health, Safety and Welfare

A city agency provides public health standards, regulations and ordinances, such as no smoking in public places, or occupancy limits on public and commercial buildings. Regulations of this type provide guidance for communities that directly offset contingent health safety costs and also improve the intrinsic quality of the area.

Public welfare in the built environment necessitates requirements for American Disabilities Act compliant sidewalks and staircases. These include ADA curbs, handrails, tactile paving at crosswalks, audio countdown signals at traffic crossings, to name only a few.

As a trail and open space's direct and indirect value to the community are agreed upon at the community policy level, these facilities become a more standardized element, shifting from a desired community amenity to an obtainable community feature.

### 2.5.3 Facility Use Levels

Differentiating between commuting cyclists and recreational cyclists is helpful in defining travel demand versus recreational use in the vicinity of a trail. It is challenging to determine precise trail facility use levels without survey data, but several recent safe routes to school grant applications have identified travel use patterns for school areas and SLO County bicycle commuter data can be obtained for the communities in the Salinas River Planning Area using the 2010 *Census and American Communities Survey* 2005-2009. Bicycle demand was therefore calculated using the methods and standard values of the National Cooperative Highway Research Program, *NCHRP Report 552: Guidelines for the Analysis of Investments in Bicycle Facilities*. Based on the NCHRP method, there is estimated to be 460 commuter cyclists and 1,286 daily adult cyclists within the study area.

Cycling as a transportation mode has been shown to improve individual health through increased physical activity and to result in decreased health care costs. The recreational benefits of bicycle facilities are considered a community livability benefit, due to improved proximity to recreational amenities and open space. Related reductions in auto use also benefit surrounding communities through decreased congestion and pollution, both because of bicycle commuting and because more recreational users are likely to ride to the trail system rather than drive, if adequate connections are available.

## 2.6 Trail Issue Perceptions and Realities

### 2.6.1 Summary of Trail Issues and Solutions

The following potential issues were presented early in the public outreach process (Workshop #1) and were also included in questions in an online survey.

**Issue: May prevent private owners from doing what they want with their property**

*Solution: Transference of development rights, assurance of reasonable use, tax credits and other allowances*

**Issue: May decrease property value**

*Solution: If handled appropriately, no property value reduction should occur. Implementing trail amenities has actually been shown to increase adjacent property values, so much so that the residences within a development that are immediately adjacent to a trail are routinely valued higher than identical residences a street away.*

Development rights are the unused rights to develop a property to the extent permitted under state or local law. As vacant land becomes scarce and as states and municipalities have acted to restrict and regulate new construction, the value of development rights has increased.

In recent years, some states and local governments have adopted rules permitting unused development rights to be transferred (Transferred Development Rights, TDR) to another parcel within the regulated area that may be used to construct improvements, such as a building with greater floor space or height than would be permitted in the absence of those development rights. As a result of the rules permitting development rights to be transferred to other parcels, an owner of excess development rights may benefit by selling the transferable development rights to the owner of another parcel who desires to develop the other parcel.

It is the policy of the County of San Luis Obispo that no taking of private property may occur without a willing owner's participation.

**Issue: Criminal activities along trail or next to private property**

*Solution: Carefully designed limited vehicular access to trail heads, appropriate buffers from developed properties, and trail segments that can be monitored*

**Issue: Trespassers through adjacent property**

*Solution: Fencing, barriers and signage as well as prompt closure of newly created "social" pathways away from the designated trail*





### **Issue: May encourage homeless living in the corridor**

*Solution: Appropriate vegetation clearance along trail edges, fencing and regular monitoring*

### **Issue: Trash and graffiti**

*Solution: Increased presence of trail users decreases dumping and vandalism through carefully designed limited vehicular access to trail heads, limited graffiti attracting surfaces and routine volunteer trash pick-up programs*

Many law enforcement officials support formalized trails because of the increase of people circulating in areas where it would otherwise be difficult to patrol regularly. In some cases, trails actually led to a decrease in problems commonly encountered, such as underage drinking.

Just as neighborhoods may choose to form neighborhood-watch programs, the concept of more “eyes on the street” as a crime deterrent is a real prevention strategy since potential perpetrators know the more the public witnesses or is aware of crime, the higher the likelihood for getting caught.

A study by the National Park Service and Rails-Trails Conservancy titled Rails-Trails and Safe Communities looked at 372 trails nationwide and concluded that rail-trails do not increase crime. The study included a table comparing crime rates in urban, suburban and rural communities nationwide with those on trails. In the study year, there were 230 assaults for every 100,000 people nationwide in rural areas, compared to trails in rural areas, with an assault rate of 0.01 per 100,000 users.

### **Issue: Disturbances caused by unleashed dogs**

*Solution: Barriers, enforcement and education*

While constraining ownership/pet behavior is not the intent behind this trails planning effort, a balance between public safety and public health must be maintained. Local cities and San Luis Obispo County prescribe leash laws and dogs in public places via ordinances, a variety of local regulations and associated fines.

While most cities in San Luis Obispo County allow pets in public parks, until recently the City of Paso Robles prohibited pets in all parks, either on- or off-leash. Centennial Park was designated in 2008 as open to dog walkers, but the city-wide ordinance remains.

### **Issue: Possible use of the trails by off highway vehicles**

*Solution: Appropriate barrier design, appropriate designated OHV areas and enforcement*

While the Federal Policy for Highway Traffic Noise, Noise Abatement Criteria (NAC) identifies a category for recreational areas, there are no recreational trail-specific criteria for noise guidelines.

Noise related to trail use is challenging due to subjectivity. What may bother one listener may not bother another. Noise is more problematic where motorized use is popular or in concentrated areas of use. OHV trails are more widely thought to be problematic noise generators due to loud noise associated with engine exhaust.

OHV users can represent a nuisance to other trail users because of their higher speeds coupled with unexpected maneuvering, as well as a reputation for associated higher risk-taking from often younger, more thrill-seeking riders. However, with responsible users following codes of conduct and given the high utility of OHVs in agricultural areas, incidents of misconduct are limited and equally subjective.

### **Issue: May increase flood damage to adjacent property**

*Solution: Appropriate planning and design that allows trail bed to protect properties not increase damage*

### **Issue: Damage to sensitive plants or animals**

*Solution: Barriers, education through interpretive panels, trail alignments avoiding sensitive areas and buffers*

## **2.6.2 Potential Public Safety Issues and Solutions**

The majority of trail users have safe experiences. Along the Salinas River Trail study area, most portions of the trail are within a quarter mile of a public roadway. The primary direct route is fairly flat and some of the existing and proposed hard surface trail will be wide enough to accommodate emergency vehicles. Most, if not all, of the Salinas River Trail would be within cellular-phone coverage, so trail users should be able to contact emergency personnel from any trail section.

Law enforcement patrols can issue citations for misconduct, document graffiti and respond to medical issues. Officers may consider patrolling on bicycle, or utilizing smaller vehicles, with a high emphasis on visibility. The City of Paso Robles Public Safety Office reports that in the last three years, most call-outs for emergency response within the corridor were for vehicles stuck in the sand, followed by homeless encampments.

Twin Cities Community Hospital is located less than a mile from the Salinas River corridor at 1100 Las Tablas Road in Templeton.

Trail segments will be designed and constructed to address potential vehicular loads with curb ramps at access points and pavement surfacing to accommodate authorized emergency and maintenance vehicles.

## Exposure to Hazardous Trail Conditions

Natural hazards are ever-present, and in some circumstances, an inescapable part of life. Few trail users want trails closed because of the risk of harm, yet at the same time, certain potential dangers must be acknowledged and addressed.

The County of San Luis Obispo and communities in the Salinas River Planning Area subsection have an obligation to promote public safety and a duty to warn, including the following:

- *Keeping the trail in safe repair*
- *Inspecting the trail for hidden hazards*
- *Removing hazards or warning of their presence*
- *Anticipating foreseeable uses and activities by users and taking reasonable precautions to protect users from foreseeable dangers*
- *Conducting trail operations with reasonable care for user safety*

Heavy rain storms can damage trails, trailheads, open spaces and ecosystems along the Salinas River. After a major storm, trail sections would likely be closed if users will encounter flooding, bridge or trail wash-outs, blown-out water pipes or landslides.

The development of a risk management program can increase safety while demonstrating the exercise of reasonable care. There are significant benefits to developing a basic risk management program, including:

- *Promotion and demonstration of concern for user safety*
- *Assurances that steps are being taken to maximize safety*
- *Demonstration of intent to provide a reasonably safe environment*
- *Reduction in losses and/or injuries*
- *More effective and efficient use of funds and resources*
- *Increased safety for users*

## Exposure to Hazardous Conditions by Other Users

Unsafe situations or conditions caused by other trail users can keep visitors from achieving their desired trail experiences. This goal interference due to safety concerns is a common source of conflicts on trails. There are a number of threats to user safety that can occur on trails. Some of these include:

- *Collisions and near misses among users and/or their vehicles*
- *Reckless and irresponsible behavior*
- *Poor user preparation or judgment*
- *Unsafe conditions related to trail use (such as deep ruts or other damage due to wear)*
- *Unsafe conditions not related to trail use (such as obstacles, terrain, weather, river crossings, etc.)*
- *Poor trail design, construction, maintenance or management*
- *Other hazards (such as animals, lightning, cliffs, crime, etc.)*

To help maintain user safety on trails, planners and managers can attempt to control or influence many factors, including the following:

- *User speed (often has more to do with speed differential than the speed itself)*
- *Mass of user and vehicle (if any)*
- *Sight distances*
- *Trail width*
- *Trail surface*
- *Congestion (such as number of users per mile)*
- *Users overtaking one other silently/without warning*
- *Trail difficulty (obstacles, terrain, condition, etc.)*
- *User skill level and experience*
- *User expectations and preparedness (For example, walkers who understand they may see cyclists on a particular trail can better prepare themselves for possible encounters)*
- *Emergency procedures*
- *On-site management presence*

## Potential Fire Starts in High Fuel Areas

Fire prevention activities occur year-round throughout the communities in the Salinas River Planning Area. Prevention goals are to educate the public on the various ways wildfires start, the role fire plays in our ecosystem, how to prevent unwanted human-caused fires and how to protect homes against wildfire.

The County of San Luis Obispo puts emphasis on preventative measures. Pre-fire activities, such as clearing defensible space, putting in and maintaining fire safe landscaping, utilizing prescribed burns, creating fuel breaks, and practicing forest management are proven methods to reduce wildfire destruction.

Pre-fire management actions work to:

- *Reduce property losses*
- *Fire-fighting costs*
- *Increase firefighter safety*
- *Contribute to ecosystem health*

The greatest risk for human-caused fires exists in high use areas and major travel corridors and fire prevention efforts are focused in these areas. Human-caused fires are due primarily to abandoned campfires, illegal fireworks on and adjacent to public lands during the dry season, arson and field debris burning during high fire danger conditions.

Forest and brush fires are a potential hazard along the Salinas River, especially during early spring, summer and fall. High levels of non-native plants create an increased fire hazard. The California Wildland-Urban Interface Code, CA Department of Forestry, Fire Protect and the CA State Fire Marshall are all resources for fire prevention.



### Homeless Encampments, Crime, Litter and Graffiti Concerns

Some sections of the Salinas River, particularly near communities, have long been plagued by homeless encampments. Generally, rural trails are difficult to police. Compared with streets and buildings, their boundaries are complex and ill-defined. Dense vegetation, especially in more naturalistic settings, often inhibits surveillance, and cameras are unlikely to be able to cover the whole trail. Policing along a rural trail is as much, or even more, about working to promote and increase legal and acceptable activities as it is about working to reduce or eliminate antisocial and unacceptable activities.

While there are sections of the river with long-standing graffiti, it remains illegal to tag or add additional graffiti to river banks, bridges or supports. Local groups are working with local law enforcement to beautify the river.

*“So-called undesirables are not the problem. It is the measures taken to combat them that [are] the problem... The best way to handle the problem of undesirables is to make the place attractive to everyone else.”* - William H. Whyte, advocate of public open spaces.

### General Public Health Related to Active Use Versus Issues Listed Above

Active use of trails for positive health outcomes is seen by health professionals as an excellent way to encourage people to adopt lifestyle changes that will bring lifetime health benefits. The Centers for Disease Control and Prevention (CDC) recognize that providing for active living through community design is a health issue that encourages recommended daily physical activity. The CDC refers to places where everyone can enjoy daily, moderate levels of walking, bicycling and other exercise as Active Community Environments (ACEs).

A walking- and bicycle-friendly community is also a more livable community where people of all ages and abilities can travel freely. ACEs encourage and accommodate walking and cycling through their approach to:

- *Transportation facilities and services*
- *Land-use planning and development*
- *Schools*
- *Recreation, parks and trails*
- *Safety, security and crime prevention*

### 2.6.3 Potential Environmental Issues and Solutions

There are several biological constraints that need to be considered when planning for trails. Implementation of plan activities has the potential to impact special-status plant and wildlife species, sensitive vegetation communities, federally protected wetlands and waters, and wildlife movement corridors. These impacts will need to be assessed and mitigated for prior to plan implementation. In addition, the plan will need to ensure compliance with local policies and habitat conservation plans. Table 2-7 lists some of the sensitive animal species that could exist in the study area. Table 2-8 documents the plant species also considered sensitive. No detailed mapping is available in the study area to adequately assess the impacts of the proposed trail route or to characterize the precise location of sensitive plants and animals. This mapping will have to occur as part of the next phase of design, engineering and environmental analysis.



## Tables 2-12: Sensitive Animals

Sensitive Animals								
Common Name	Scientific Name	Status						
		Federal*			State**			
		FE	FT	FSC	SE	ST	CSC	P
Southern steelhead trout	<i>Oncorhynchus mykiss irideus</i>	✓					✓	
California red-legged frog	<i>Rana aurora draytonii</i>		✓				✓	✓
Western spadefoot toad	<i>Scaphiopus hammondi</i>			✓			✓	
Blunt-nosed leopard lizard	<i>Gambelia silus</i>	✓			✓			
Arroyo southwestern toad	<i>Bufo microscaphus californicus</i>	✓					✓	
California tiger salamander	<i>Ambystoma californiense</i>						✓	
Coast Range newt	<i>Taricha torosa torosa</i>						✓	
Southwestern pond t	<i>Clemmys marmorata pallida</i>			✓			✓	✓
Cooper's hawk (nesting sites)	<i>Accipiter cooperi</i>							
Burrowing owl (burrowing sites)	<i>Athene cunicularia</i>			✓			✓	
California condor	<i>Gymnogyps californianus</i>	✓			✓			
American peregrine falcon	<i>Falco peregrinus anatum</i>	✓			✓			
Least Bell's vireo	<i>Vireo bellii pusillus</i>	✓			✓			
Bald eagle	<i>Haliaetus leucocephalus</i>		✓			✓		
Swainson's hawk	<i>Buteo swainsoni</i>							
Loggerheads shrike	<i>Lanis ludovicianus</i>			✓			✓	
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	✓				✓		
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	✓						
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>		✓					

### Status Codes

#### \*Federal

FE = Federally Endangered

FT = Federally Threatened

FSC = Federal Special Concern

#### \*\*State

SE = California Endangered

ST = California Threatened

CSC = California Special Concern

P = CDFW Protected Species

## Tables 2-13: Sensitive Plants

Sensitive Plants													
Common Name	Scientific Name	CPNS Lists			CPNS "R-E-D" Codes Status**								
		Status*			Rarity			Threat			Distribution		
		1B	2	4	1	2	3	.1	.2	.3	1	2	3
Straight-awned spineflower	<i>Chorizanthe rectispinai</i>	✓					✓			✓			✓
Round-leaved filaree	<i>Erodium macrophyllum</i>		✓			✓		✓			✓		
Salinas Valley goldfields	<i>Lasthenia lepalea</i>			✓	✓					✓			✓
Shining navarretia	<i>Navarretia nigelliformis ssp. radians</i>	✓				✓		✓					✓

### \*California Native Plant Society (CNPS) Status Lists Codes

List 1B = rare, threatened or endangered

List 2 = rare, threatened or endangered in California, but common elsewhere

List 4 = limited distribution

### \*\*CNPS Rarity/Threat/Distribution (R-E-D) Codes

#### Rarity

1: Rare, but found in sufficient numbers and distributed widely enough that extinction potential is low at this time

2: Distributed in a limited number of occurrences, occasionally more if each occurrence is small

3: Distributed in one to several highly restricted occurrences, or present in such small numbers it is seldom reported

#### Threat (formerly "Endangerment")

.1: Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2: Fairly endangered in California (20-80% occurrences threatened)

.3: Not very endangered in California (<20% of occurrences threatened or no current threats known)

#### Distribution

1: More or less widespread outside California

2: Rare outside California

3: California endemic



# Salinas River Trail Master Plan



**Guideline and Standards**

**3**





This chapter summarizes standards and guidelines for pedestrian, bicycle and trail facilities that may be part of the Salinas River Trail network. Multiple public agencies own property within the study area, including the California Departments of State Hospitals (DSH), Transportation (Caltrans) and Parks and Recreation (DPR). The National Park Service (NPS) manages the Juan Bautista de Anza National Historic Trail. Depending on final alignment, significant portions of this trail could be located within state property or the Anza Trail corridor, which follows the Salinas River from south of Santa Margarita to Paso Robles. Trail facilities will therefore need to meet applicable federal, state and local standards. The design standards and guidelines presented in this chapter have been incorporated into the alignments presented in Chapter 4, Master Plan Recommendations.

Federal, state and local environmental regulations apply to trails and other forms of development regardless of how dramatic or subtle the changes are intended to be. Most trail systems strive to limit impacts, but they also are often sited in sensitive areas. The application of design standards and guidelines coupled with impact avoidance and protective measures can often offset these potential impacts. These requirements are discussed in Chapter 5, Action Plan, in the context of permit requirements for pedestrian, bicycle and trail facilities. Note that for clarity, paved routes are called “paths” and natural surfaced routes are referred to as “trails.”

## 3.1 Design Guidelines and Regulations

Table 3-1 identifies the topics addressed in each of the design guidelines and regulations described in this chapter.

## 3.2 Transportation Facilities versus Recreational Trails

Pedestrian and bicycle facilities can be separated into two general categories: transportation facilities and recreational trails. Distinct design standards and guidelines apply to each category as described in the following sections.

### 3.2.1 Transportation Facilities

Transportation facilities typically pass through or connect developed areas and serve as part of a multimodal transportation system. Pedestrian and bicycle facilities may be required to meet transportation facility design standards in order to receive state or federal funding, comply with owner or regulatory agency access or design standards, or to secure approval of an encroachment permit within state right-of-way.

*California Streets and Highways (S&H) Code* Section 887 defines a “non-motorized transportation facility” as a facility designed primarily for the use of pedestrians, cyclists, or equestrians. It may be designed primarily for one of these uses or as a joint-use facility. The code further states that a non-motorized transportation facility may be part of the highway (such as a shoulder) or separated from highway traffic for exclusive non-motorized use (such as a shared-use path or sidewalk). Transportation facilities must comply with *ADA Accessibility Guidelines for Buildings and Facilities (ADAAG)*. All standards set forth in *Caltrans Highway Design Manual Chapter 1000* must be met for a Class I, II, or III bikeway to serve as a transportation facility.





## Table 3-1: Summary of Design Guidelines and Regulations

Design Guideline or Regulation	Topics Addressed
<b>Federal</b>	
<b>American Association of State Highway and Transportation Officials (AASHTO)</b>	
<i>Guide for the Development of Bicycle Facilities (2013)</i>	• Shared roadways (lane width, on-street parking, signing)
	• Bicycle lanes (widths, intersections, symbol guidelines)
	• Shared use paths (separation from roadways, width, clearance, design speed, grade, sight distance, intersections, signing, marking, drainage)
	• Other design considerations (bicycle facilities through interchange areas, traffic signals, bicycle parking, accessibility requirements)
<b>The Architectural and Transportation Barriers Compliance Board (Access Board)</b>	
<i>Proposed Guidelines for Public Rights-of-Way (2011)</i>	Minimum standards for sidewalks, street crossings, and other elements of the public rights-of-way (including walkways and sidewalks, street or highway shoulders where pedestrians are not prohibited, crosswalks, islands and medians, overpasses and underpasses, on-street parking spaces and loading zones, and equipment, signals, signs, street furniture, and other appurtenances provided for pedestrians)
	• (Recreational) trails (surface requirements, maximum slope, clear tread width, passing spaces, signs, resting intervals, gates and barriers)
<i>Draft Final Guidelines for Outdoor Developed Areas (2009)</i>	• Outdoor recreation access routes (surface requirements, maximum slope, clear width, passing spaces, slopes, resting intervals)
	• Beach access routes (surface, clear width, slopes, resting intervals)
	• Picnic and camping facilities
<b>U. S. Department of Justice (DOJ) Amendment to the ADA</b>	
<i>Regulations Regarding the Use of Wheelchairs and Other Power Driven Mobility Devices 28 CFR part 35 (2011)</i>	• Requires managers of public facilities, including trails, to accommodate people with disabilities who wish to use various types of non-wheelchair powered vehicles for access
	• See California Department of Parks and Recreation <i>Departmental Notice No. 2011-02: Permissible Uses of Other Power Driven Mobility Devices (OPDMD)</i>
<b>Federal Highway Administration (FHWA)</b>	
<i>Manual of Uniform Traffic Control Devices (2012)</i>	• Defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways and private roads open to public traffic
	• Caltrans adopted updated California MUTCD (CA MUTCD) in January 2012
<i>Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide (2001)</i>	• Shared-use paths (access to path, path surfaces, changes in level, grades, rest areas, width, passing spaces, railings, signs)
	• Recreation trails (path surfaces, changes in level, grades, rest areas, width, passing spaces, trails through steep terrain, steps, edge protection, signs)
	• Outdoor recreation access routes (surface, clear tread width, openings, tread obstacles, protruding objects, passing space, cross slope)
<b>State</b>	
<b>California Department of Transportation (Caltrans)</b>	
<i>Highway Design Manual (2012)</i>	• Class I bikeway/shared use path (width, clearances, grade, separation from highways, design speed, sight distance, horizontal)
	• Class II bicycle lane (width, placement, at-grade interchange design)
	• Class III bicycle route (bicycle route criteria, at-grade interchange design)
	• Multi-purpose trails
	• Clear recovery zones
<i>California MUTCD (2012)</i>	• Signs (application, placement)
	• Pavement markings (word messages, symbols, arrows, reflectorization, patterns and colors on shared-use paths, demarcating)
	• Traffic signals and crossing beacons (application, placement)
<b>California Department of Parks and Recreation</b>	
<i>Trail Handbook (1991)</i>	• Trail design, construction, survey, operations and maintenance standards
	• Accessibility standards
<i>Accessibility Guidelines (2009)</i>	• Recommendations and regulations for compliance with accessibility laws
	• Signs (placement standards, minimum character sizes, level of information required)
<i>Brand Standards Handbook (2007)</i>	• Specification for the State Park Logo and its use
	• Standard colors and example designs for park entrance and directional signs
<i>Departmental Notice No. 2011-02: Permissible Uses of Other Power Driven Mobility Devices (2011)</i>	• Establishes standards for OPDMD access (size, weight, speed, noise, emissions)
<b>County of San Luis Obispo</b>	
<i>General Plan Parks and Recreation Element (2006)</i>	• Pedestrian (trail tread widths, horizontal and vertical clearances and maximum gradients)
	• Bicycle (trail tread widths, horizontal and vertical clearances and maximum gradients)
	• Horse (trail tread widths, horizontal and vertical clearances and maximum gradients)
	• Multi-use trails (tread widths, horizontal and vertical clearances and maximum gradients)
	• Signage
	• Trail amenities



### 3.2.2 Recreational Trails and Paths

Recreational trails and paths are routes, but also destinations in and by themselves. They typically connect and traverse open space areas and natural features, rather than developed areas. The Federal Highway Administration (FHWA) describes recreational trails or paths as those designed to provide a recreational experience. Using them is a choice made by those who desire the experience they provide. Recreation trails or paths should provide for users with disabilities access to the same range of experiences offered to other users at the site. This means that they should be designed to reach destinations or points of interest and travel through various environments. Providing access to people with disabilities is best achieved by providing route information in multiple formats and by minimizing grade, cross slope, barriers and unstable surfaces.

A significant difference between transportation and recreational routes in California is that recreational routes may be single-use, such as for hiking, cycling, or equestrian only, but transportation routes support all forms of cycling and walking. While both types may be shared-use facilities supporting various user types, transportation routes are intended to serve primarily a connectivity purpose and therefore require a hard all-weather surface rather than a natural surface. They may be desirable scenic routes as well, but that is not their emphasis and the shortest connection between the users origin and destination is essential.

### 3.2.3 Facility Type Selection

Site conditions, particularly steep topography, can limit the trail or path facility types appropriate for a given segment. For example, Caltrans recommends Class I shared-use paths be limited to a maximum grade of five percent (except for short segments). For grades greater than five percent, a pathway meeting Class I standards is likely to require switchbacks, depending on the grade and length of the slope. Long, steep slopes can therefore create circuitous routes. Natural surface recreational trails allow for steeper grades and design features such as stairs and may be more appropriate for steep, lengthy slopes. However, wherever possible, an overall maximum of five percent is recommended.

Transportation paths typically serve a wide range of user types and connect residential land uses with transit, commercial, institutional, office, educational and recreational uses. Due to these characteristics, transportation paths are more likely than recreational paths to offset vehicular trips, potentially easing roadway congestion and reducing greenhouse gas emissions.

While recreational trails are typically less expensive to construct than similarly routed ADA-compliant or shared-use paths, more grant funding is available for construction of facilities that serve transportation needs. The Salinas River Trail is likely to feature segments designed to transportation standards, as well as segments designed as recreational trails paralleling each other in a “braided” fashion to provide users maximum choice.

## 3.3 Federal Standards and Guidelines

### 3.3.1 American Association of State Highway and Transportation Officials (AASHTO)

AASHTO's *Guidelines for the Development of Bicycle Facilities* is the primary national standard for designing on-street bicycle facilities and shared-use paths. The most recent version of this nationally recognized document is the 4th Edition, dated 2012, with some additions in February 2013.

#### Rural Roads

The AASHTO guide makes recommendations to accommodate cyclists and pedestrians on rural roadways, such as adding or improving paved shoulders on roadways with higher speeds or traffic volumes because these shoulders provide safety benefits for drivers, cyclists and pedestrians. Expanded shoulders provide space for maintenance operations, to escape potential crashes, or for temporary storage of disabled vehicles. They extend roadway service life by reducing edge deterioration and further improve sight distances. Paved shoulders can also benefit pedestrians by providing a place to walk in locations where there is no sidewalk and the existing roadside condition is unsuitable for walking.

Roadway retrofits for bicycle facilities are best accomplished as part of repaving or reconstruction projects. On uncurbed cross sections with no vertical obstructions immediately adjacent to the roadway, paved shoulders should be at least four feet wide to accommodate bicycle travel. Rugged terrain and other physical features, however, may impact the amount of horizontal space available for a roadway section.





In retrofit situations with minimal available right-of-way, a minimum width of three feet of operating space is required between the edge line of the vehicle travel lane and the edge of pavement (where there is no curb). Where physical space is limited, additional real estate for shoulders may be gained by restriping roadways to decrease the width of vehicle travel lanes. The AASHTO guide states the following:

*"Where the total width of the outside travel lane is 14 feet, it would be preferable to instead provide a 10-11 foot travel lane and a 3 - 4 foot shoulder. Re-striping a 14 foot travel lane as a 12 foot lane and a 2 foot shoulder is not recommended. Since the paved shoulder would not accommodate bicycle operating width, and trying to avoid or repeatedly crossing an edge stripe is uncomfortable, bicyclists would need to ride in the travel lane instead. Even if a bicyclist manages to ride (partly or mostly) on such a narrow paved shoulder, this design may convey a misleading impression of adequate width to a motorist overtaking the bicyclist in the adjacent travel lane, when in fact it would be necessary for the motorist to be driven at least part way into the next lane in order to pass the bicyclist with adequate clearance."*

Signs should be used on rural roadways where non-motorized users are anticipated, to alert drivers that cyclists may be encountered and that they should be mindful and respectful of them. Options available include the "Share the Road" sign assembly (MUTCD: W11-1 + W16-1P).

The AASHTO guide further states that rumble strips create a potential hazard for cyclists and are not recommended to be used on shoulders where cycling is anticipated. If they are to be used, a minimum clear path of four feet from the rumble strip to the outside edge of the paved shoulder should be provided. In addition, the rumble strip should be in the travel lane beside the fog line, or preferably, actually on the fog line.

## AASHTO Design Guidelines

- Paved shoulders should be at least four feet wide
- In retrofit situations where minimal right-of-way is available, paved shoulder should be a minimum of three feet wide
- Where physical space is limited, additional width for shoulders may be gained by restriping roadways to decrease the width of vehicle travel lanes

## Shared-use Paths

Shared-use paths allow for two-way, off-street bicycle and pedestrian use. These facilities are frequently found in parks, along rivers, beaches and in greenbelts or utility corridors where right-of-way exists and there are few conflicts with motorized vehicles.

## AASHTO Design Guidelines

- Minimum for a two-way shared-use path (only recommended for low traffic situations): 10 feet
- Recommended for high-use areas with multiple users such as joggers, cyclists, rollerbladers and pedestrians: 12 feet or more
- Eight foot width may be used for a short distance due to physical constraints
- Lateral clearance: Two feet or greater shoulder on both sides.
- Overhead clearance: Eight feet min., 10 feet recommended.
- Maximum design speed for shared-use paths: 20 mph. Speed bumps or other surface irregularities should not be used to slow bicycles
- Recommended maximum grade: five percent
- Steeper grades can be tolerated for a maximum of 500 feet

## Railings

Protective railings, fences, or barriers should be a minimum of 42 inches. A 48 inch railing height is recommended at sharp curves, particularly on bridge approaches. To prevent snagging pedals or handlebars, vertical balusters are not recommended for railings designed to provide protection cyclists.

## Sidepaths

A sidepath is a shared-use path immediately adjacent to and parallel to a roadway. AASHTO provides guidelines for the appropriate use of sidepaths but states that a "...pathway adjacent to the road is generally not a substitute for the provision on on-road accommodation such as paved shoulders or bike lanes."

Sidepaths can be considered under the following conditions:

- The path will generally be separated from motor vehicle traffic.
- Bicycle and pedestrian use is anticipated to be high.
- To provide continuity with an existing path through a roadway corridor.
- The path can be terminated at each end onto streets with good bicycle and pedestrian facilities, or onto another well-designed path.
- There is adequate access to local cross-streets and other facilities along the route.

## AASHTO Design Guidelines

- A sidepath should satisfy the same design criteria as shared-use paths in independent corridors.
- A minimum five foot separation between the sidepath and a high-speed roadway is recommended.

Where the separation is less than five feet, a physical barrier or railing should be provided.

### 3.3.2 Architectural and Transportation Barrier Compliance Board (Access Board)

The *Americans with Disabilities Act* (ADA) of 1990 had major significance for those who plan and design any type of publicly-used facility, including trails. The Access Board is responsible for developing accessibility guidelines for new construction and alterations of facilities subject to the ADA, which applies to state and local government facilities, places of public accommodation and commercial facilities, or virtually every type of facility open to the public, including bicycle and pedestrian facilities, paths and trails.

The Access Board has developed accessibility guidelines for public rights-of-way, including walkways and sidewalks, parking areas and associated features. Final guidelines have been published for Outdoor Recreation Areas, including Outdoor Recreation Access Routes between developed facilities and trails. The Access Board has also developed guidelines for shared-use paths. The *Supplemental Rule to Address Access to Shared Use Paths* is currently in the public comment phase and has not been finalized or formally adopted.

#### Sidewalks and Pedestrian Routes

The federal accessibility guidelines for sidewalks, street crossings and other elements of the public rights-of-way are contained in the *Proposed Guidelines for Public Rights-of-Way*, July 2011 and are available at [www.access-board.gov/prowac/index.htm](http://www.access-board.gov/prowac/index.htm). These guidelines cover facilities for pedestrian circulation and use in the right-of-way, including walkways and sidewalks, street or highway shoulders where pedestrians are not prohibited, crosswalks, islands and medians, overpasses and underpasses, on-street parking spaces and loading zones and equipment, signals, signs, street furniture and other features provided for pedestrians. They contain detailed guidance and links to other technical standards and guidelines, such as the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) and the *Guide for the Planning, Design and Operation of Pedestrian Facilities*, AASHTO, July 2004. The guidelines are proposed rules that are expected to be adopted as law in the near future. The July 2011 *Proposed Guidelines* are an update of the 2005 *Revised Draft Guidelines*.

The guidelines define two types of pedestrian facilities:

1. *Pedestrian Access Route* - A continuous unobstructed walk within a pedestrian path that provides accessibility.
2. *Pedestrian Circulation Path* - A prepared exterior or interior way of passage provided for pedestrian travel.

In California, the Division of the State Architect (DSA) develops, adopts and publishes regulations to address the state's own standards for access to people with disabilities to comply with ADA and, in some cases, exceed the federal standards. See: *California Access Compliance Reference Manual*, Division of the State Architect, 2011 or latest version.

### Rules for Shared-use Paths

Shared-use paths (also called multi-use paths) often serve recreational purposes while providing off-road transportation routes for pedestrians, cyclists, roller skaters and others. Currently there are no adopted federal rules or guidelines specific to the design of shared-use paths for access to people with disabilities. The Access Board initiated rulemaking to address shared-use paths after comments from the public urged the Board to specifically address access to shared-use paths since they are distinct from sidewalks and trails. Shared-use paths, unlike most sidewalks, are physically separated from streets by an open space or barrier. They also differ from trails because they are designed not just for recreation purposes but for transportation as well. These supplemental accessibility guidelines specific to shared-use paths will be part of the guidelines for pedestrian facilities in the public right-of-way.

The primary general design standard for shared-use paths is the *AASHTO Guidelines for Bicycle Facilities*.

#### Recreational Trails

Recreational trails by law must be designed to be accessible by people with disabilities, where feasible, but there are separate, more flexible standards for recreational trails from urban bicycle and pedestrian transportation facilities and routes that connect developed facilities. The standards include exceptions and exemptions for trails where meeting standards would detract from the resources that the trail is accessing, or where this is physically infeasible. The federal guidelines are contained in the *Guidelines for Outdoor Developed Areas*, dated December 18, 2009, available at [www.access-board.gov/outdoor/](http://www.access-board.gov/outdoor/).

These guidelines cover trails, outdoor recreation access routes, beach access routes and picnic and camping facilities. The *Guidelines* are a proposed rule that is expected to be adopted as law. No changes are expected.

The *Guidelines* define two types of trail facilities:

1. *Outdoor Recreation Access Route* - A continuous unobstructed path designated for pedestrian use that connects accessible elements within a picnic area, camping area, or designated trail head.
2. *Trail* - A route designed, constructed, or designated for recreational pedestrian use or provided as a pedestrian alternative to vehicular routes within a transportation system.





## Comparison of Federal Standards

Table 3-2 summarizes the key federal standard dimensions for the various types of trail, bicycle and pedestrian facilities.

### ADA Regulation Amendment (28 CFR part 35)

As of March 15, 2011, a federal ADA ruling went into effect that requires managers of public facilities, including trails, to accommodate people with disabilities who wish to use various types of non-wheelchair powered vehicles for access. By law, an assessment and policy prepared by the managing agency is the only limiting factor on the types of vehicles or devices that visitors may use. However, the agency does not have to modify its facilities to accommodate the allowed devices, so the access requirement is significantly different than for other ADA access rules.

See Section 3.4.2 for California State Parks' policy for access by Other Power Driven Mobility Devices (OPDMDs), or motorized accessibility devices that do not meet the definition of a wheelchair.

## 3.3.3 Federal Highway Administration (FHWA)

The United States Department of Transportation (USDOT) has adopted a policy statement that cycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist. FHWA references the use of the best currently available standards and guidelines, such as AASHTO and the MUTCD. Also, all federally funded transportation enhancement (TE) projects must be in full compliance with ADAAG.

### Manual of Uniform Traffic Control Devices (MUTCD)

The MUTCD defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways and private roads open to public traffic. The MUTCD is published by the FHWA under 23 Code of Federal Regulations (CFR), Part 655, Subpart F. The MUTCD is a compilation of national standards for all traffic control devices, including road markings, highway signs and traffic signals. It is updated periodically to accommodate the nation's changing transportation needs and address new safety technologies, traffic control tools and traffic management techniques.

The MUTCD is the national standard, but state transportation agencies differ in how they comply with MUTCD standards. Some states adopt the MUTCD as their standard. Other states

**Table 3-2: Key Bicycle, Pedestrian and Trail Standards**

	Class 1 Shared Use Path *	Pedestrian Access Route	Outdoor Recreation Access Route **	Trail ***	Ramp
<b>Width</b>	8' min. (low use areas), 10' min. with 2' shoulders	48" min. with 60" min. passing space every 200' or less	36" min. with 60" min. passing space every 1,000' or less	36" min. with 60" min. passing space every 1,000' or less	60" min.
<b>Gradient</b>	<ul style="list-style-type: none"> <li>• &lt;5% (&lt;1:20) any length</li> <li>• 5-6% (1:20-16.7) for up to 800'</li> <li>• 7% (1:14.3) for up to 400'</li> <li>• 8% (1:12.5) for up to 300'</li> <li>• 9% (1:11.1) for up to 200'</li> <li>• 10% (1:10) for up to 100'</li> <li>• 11% (1:9.1) for up to 50'</li> </ul>	<ul style="list-style-type: none"> <li>• 1:20 (5%) max. – any steeper treated as ramp</li> <li>• Sidewalk abutting roadway can match roadway gradient and remain compliant</li> </ul>	<ul style="list-style-type: none"> <li>• 1:20 (5%) any length</li> <li>• 1:12 (8.33%) for up to 50'</li> <li>• 1:10 (10%) for up to 30' with resting intervals 60" long and as wide as trail with max. 1:33 (3.33%) gradient</li> </ul>	<ul style="list-style-type: none"> <li>• 1:20 (5%) any length</li> <li>• 1:12 (8.33%) for up to 200'</li> <li>• 1:10 (10%) for up to 30'</li> <li>• 1:8 (12.5%) for up to 10' with resting intervals 60" long as wide as trail and max. 1:20 (5%) gradient</li> <li>• No more than 30% of total trail length shall exceed 1:12</li> </ul>	<ul style="list-style-type: none"> <li>• 8.33% (1:12) max. with max. 30" rise/30' length between landings at to and bottom</li> <li>• 60" x 60", max. 2% gradient</li> <li>• Landing 72" long x 60" at change in direction</li> </ul>
<b>Cross Slope</b>	5% max	2% max	1:33 max. (3.33%) or up to 1:20 (5%) where needed for effective drainage	5% max	2% max
<b>Surface</b>	Smooth, paved	Smooth, paved	Firm and stable (Specific standards apply)	Firm and stable (Specific standards apply)	Smooth, paved
<b>Handrails</b>	N/A	N/A	N/A	N/A	Required on both sides of any ramp with rise greater than 6"

\* AASHTO Guideline – no ADA guidelines

\*\* All Outdoor Developed Area facilities may be exempted from the Guidelines under the following conditions (1019):

1. Compliance is not feasible due to terrain.
2. Compliance cannot be accomplished with prevailing construction practices.
3. Compliance would fundamentally alter function or purpose of facility or setting.
4. Compliance is precluded by: Endangered Species Act (16 U.S.C. §§ 1531 et seq.); National Environmental Policy Act (42 U.S.C. §§ 4321 et seq.); National Historic Preservation Act (16 U.S.C. §§ 470 et seq.); Wilderness Act (16 U.S.C. §§ 1131 et seq.); or other Federal, State, or local law the purpose of which is to preserve threatened or endangered species; the environment; or archaeological, cultural, historical, or other significant natural features

\*\*\* Additional exceptions to 1019 apply to an entire trail as identified in 1017.1

adopt the national MUTCD along with a state supplement that might prescribe which of several allowable options are selected for the state's specific purposes. Still other states, California included, use the national MUTCD as the basis for developing their own *State Traffic Control Device* manuals, which must be in substantial conformance to the national MUTCD. Caltrans adopted the California MUTCD (CA MUTCD) in January 2012. (See Section 3.4.1.)

### ***Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide***

This document (2001) provides planning, assessment and design guidance for trails. For the purposes of the guidebook, a trail is defined as a path of travel for recreation and/or transportation within a park, natural environment, or designated corridor not classified as a highway, road, street or sidewalk. In Chapter 12 (planning) and Chapter 13 (assessment), recreation trails and shared-use paths are discussed as one unified topic. In terms of design, they are given separate chapters (Chapters 14 and 15).

## **3.4 State Standards and Guidelines**

### **3.4.1 California Department of Transportation Highway Design Manual (HDM)**

The State of California, Department of Transportation (Caltrans) *Highway Design Manual* is used by Caltrans staff and non-Caltrans project managers and planners proposing designs for projects within Caltrans right-of-way. The design standards cover a wide array of design focus areas including drainage, pavement and basic design policies. Chapter 1000 specifically focuses on bikeway planning and design. Any trail designated to encroach into or travel within Caltrans right-of-way must be designed per Chapter 1000 of the manual. The entire document is available online at: [www.dot.ca.gov/hq/opd/hdm/hdmtoc.htm](http://www.dot.ca.gov/hq/opd/hdm/hdmtoc.htm)

### **Bikeway Design Standards**

Caltrans defines three bikeways types in HDM Chapter 1000: Class I bikeway/shared-use path, Class II bicycle lane and Class III bicycle route. There are also other newer facility types that may be considered and are addressed in Section 3.7.12.



*Class I Multi-use Path (Minimum configuration shown: Eight foot paved width with two foot graded shoulders)*

### **Class I Multi-use Path**

Class I paths are facilities with exclusive right-of-way for bicycles, pedestrians and other non-motorized users, with vehicle cross flows minimized. Experience has shown that if significant pedestrian or other use is anticipated, a completely separate facility for pedestrians is advisable to minimize conflicts. The anticipated range of users and forecast level of use by different user groups should dictate the design of each specific facility. At a minimum, Class I multi-use paths require a eight foot paved surface with a of two foot clear, graded shoulders on both sides. For moderate to high-use segments, a wider paved surface should be considered, with 10 to 12 feet now common. In areas where a variety of users are expected, expanded unpaved shoulders should be included. Class I multi-use paths immediately parallel and adjacent to highways must be separated from vehicle traffic by a five foot horizontal separation or a two foot separation with an appropriate barrier, per the HDM. Under certain special circumstances, Caltrans may approve exceptions to the Class I multi-use path design standards.

### **Class II Bicycle Lane**

A bicycle lane is a striped space for one-way bicycle travel on a street or highway. When next to marked on-street parking, their minimum width is five feet. When bicycle lanes are contiguous with unmarked on-street parking, 11 feet or 12 feet (depending on the type of curb) is the minimum lane width. Where parking is prohibited, minimum bicycle lane width is four feet where no gutter exists and five feet where there is a typical two foot gutter.



*Class II Bicycle Lane (Upper image illustrates standard configuration adjacent to parking and lower illustrates optional dual buffering)*



Where roadway space is available and especially where parking turnover is high, six foot bicycle lanes are recommended to provide additional separation between parked vehicles and cyclists, but the lanes should be no wider than that to prevent the appearance of a travel lane that could encourage vehicle drivers to drive or park within them. Instead, any additional width should be used for a buffer between the bicycle lanes and the parking lanes, ideally two to three feet wide. This will reduce incidents of cyclists colliding with opening vehicle doors and potentially being thrown into the travel lane. This configuration is particularly helpful in guiding cyclists to ride as far away from parked vehicles as they should.

Where available roadway space for the bicycle lane is limited to six feet, it can be reduced to four feet while making the adjacent two feet next to vehicle parking the buffer space. The outer bicycle lane line becomes the buffer edge two feet out from the parking stall Ts, which perceptually separates the bicycle lane and the on-street parking. The parking stall Ts are functionally important because they not only designate the buffer's outer limits for cyclists, they clearly indicate to drivers the limits of the vehicle parking zone so that they are less likely to park too far out and impinge on the buffer space.

#### Class III Bicycle Route

A bicycle route provides a right-of-way designated by signs or pavement markings and shared with pedestrians or motorists. Chapter 1000 does not present minimum widths for Class III bikeways, since the acceptable width is dependent on many factors, including the volume and character of vehicular traffic, typical speeds, vertical and horizontal alignment, sight distance and parking conditions. However, wherever possible, curb lanes supporting Class III routes should provide the necessary width for cyclists to avoid the "door zone." Shared lane markings ("sharrows" or "SLMs") should also be installed where warranted by vehicle traffic volumes, in conjunction with "Bicycles May Use Full Lane" signs (BMUFL). See Section 3.7.12 for more information on sharrows and BMUFLs.



*Class III Bicycle Route (standard configuration with BMUFL signs)*



*Class III Bicycle Route (optional shared lane markings and BMUFL signs)*

#### California Manual of Uniform Traffic Control Devices (CA MUTCD)

The California MUTCD (CA MUTCD) is published by Caltrans to adopt uniform standards and specifications for official traffic control devices in California. Traffic control devices are defined as all signs, signals, markings and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or bikeway by authority of a public agency or official having jurisdiction, or, in the case of a private road, by authority of the private owner or private official having jurisdiction. The CA MUTCD is not applicable to privately owned and maintained roads or commercial establishments in California, unless the particular city or county enacts an ordinance or resolution to this effect.

The CA MUTCD 2012 edition incorporates the FHWA's MUTCD (2009 Edition) and includes all policies on traffic control devices issued by Caltrans that have been issued since January 21, 2010 and other editorial, errata and format changes that were necessary to update the previous documents. The CA MUTCD does not supersede Caltrans' *Standard Plans*, *Standard Specifications* or its *Special Provisions* publications, but all CA MUTCD standard statements must be met.

#### 3.4.2 California Department of Parks and Recreation (DPR) *Trail Handbook* (1991)

DPR's *Trail Handbook* contains California State Park's trail design, construction, survey, operations and maintenance standards. This handbook is widely used as a reference guide for recreational trail construction. Within state parks, reaching the decision to build a new trail, implementing significant modifications to an existing trail, or revising the allowed uses on an existing trail requires both staff specialist review and public input. While a new trail, a major trail modification, or a change in designated trail use can be implemented on a single trail basis, park-wide and regional trail system planning remains the preferred way for identifying and establishing interrelated trail corridors, which helps to mitigate resource impacts and reduce construction and maintenance costs.



This handbook has been scanned and is available online at: <ftp://ftp.parks.ca.gov/pub/DPR%20Trails%20Handbook/Complete%20Trail%20Handbook.pdf>.

### **Accessibility Guidelines (2009)**

The DPR *Accessibility Guidelines* present principles for providing accessibility within state parks. The guidelines are the primary tool provided by the California State Parks Accessibility Program to accomplish its mission of guiding the creation of universal access to California State Parks. The guidelines embody a compilation of accessibility standards, recommendations and regulations for compliance with accessibility laws, particularly those established by the Federal Access Board and are intended for use throughout California State Parks. The guidelines include standards and recommendations for numerous facilities common to parks, such as trails. As stated in the *Guidelines*, every effort should be made to install and maintain accessible trails and the Guidelines contain accessible trail standards such as maximum running slopes, minimum width and frequency of resting spaces, maximum acceptable surface gaps, optimal clearances and signage requirements. The guidelines also state that accessible trails should represent the most significant features and environmental experiences unique to the area.

The *Guidelines* provide guidance on the level of information required on trail head, direction and regulatory and safety signs. It also provides guidance on placement standards and minimum character sizes based on viewing distance from which they will be read. Trail head signs, map kiosks and direction signs should describe trail conditions in order to provide information so that persons with disabilities can determine if they can traverse the trail. Trail conditions could include average grade, cross slope, width of trail, trail surface and average size of obstacles. Identification and description signs (such as a restroom sign) must meet Title 24 and ADA standards for permanent signs. Finally, the *Guidelines* also provide standards for accessible exhibits, which would include trail map kiosks, interpretive signs and other media.

### **Brand Standards Handbook (2007)**

This handbook provides branding standards to create a strong, unified style and tone for DPR across the state. The handbook provides specifications and standard colors and example designs for park entrance and directional signs.

### **Departmental Notice No. 2011-02: Permissible Uses of Other Power Driven Mobility Devices (OPDMDs)**

California State Parks has adopted a policy for access by Other Power Driven Mobility Devices (OPDMDs). These are motorized accessibility devices that do not meet the definition of a wheelchair, such as Segways, some ATVs, golf carts and any other vehicle with a motor. In California State Parks (excluding those designated as California Off-Highway Vehicle Recreation Areas), standards for OPDMD access are as follows:

- *Size: OPDMDs shall not be wider than 36 inches or longer than 48 inches*
- *Weight: The overall weight of the device and user(s) shall not exceed 550 pounds*
- *Speed: OPDMDs shall not be operated at speeds in excess of five miles per hour. Devices capable of exceeding speeds of five miles per hour are not prohibited, but individuals observed exceeding the speed limit will be subject to citation and penalties*
- *Noise: OPDMDs shall not produce noise levels in excess of 70 decibels*
- *Emissions: OPDMDs shall not exceed zero emissions during use*

Note that meeting the noise and emissions standards preclude virtually all but electrically powered vehicles.

Of special note for this study is that users who follow these vehicle standards are allowed to use signed and designated Class I multi-use (shared-use) paths.

## **3.5 Local Standards and Guidelines**

### **3.5.1 County of San Luis Obispo**

#### **General Plan - Parks and Recreation Element**

According to this document, several large trails will connect numerous communities in the County. The Juan Bautista de Anza National Historic Trail represents an important recreation activity and a link to California's past. This national trail commemorates the route taken by a Spanish commander, Juan Bautista de Anza, in 1775-76 when he led a contingent of 30 soldiers and their families to found a presidio and mission on San Francisco Bay. Other major trails in the County include the Salinas River Trail and the California Coastal Trail.

Items specific to this plan include the following:

*Recreation Goal, Objectives and Policies - Objective C: Provide a viable multi-use trail system which is protective of private property interests and public resources.*

*Policy 3.10: Extensive trail systems, such as the California Coastal Trail, the Juan Bautista de Anza and the Salinas River Trails, will generally be developed in a series of shorter, but viable, segments. Such segments shall not be constructed until a viable link can be established connecting residential communities, parks, staging areas, or other public points of interest.*



## Parks and Recreation Element Appendix B

This appendix contains design standards for pedestrian, bicycle, equestrian and shared-use trails, signage and trail amenities applicable to facilities on properties within the County's jurisdiction. It specifies trail tread widths, horizontal and vertical clearances and maximum gradients for each of the trail or path types. It identifies sight distances and surfacing for bicycle facilities. It also provides guidance on trail amenities, including tree planting, signs, fencing and erosion control as it relates to agriculture and sensitive habitats.

### Agriculture

The San Luis Obispo County Parks and Recreation Element states that, in general:

*"Trails should be sited so as not to be adjacent to agricultural operations. Where necessary to prevent trespass, fences should be employed."*

More specifically, the element includes the following policies addressing the coexistence of trails and agriculture:

*3.8 To protect the interests of adjacent land uses (both public and private) and the environment, trail projects shall:*

- 1. Be consistent with the standards in the General Plan including the County's Agriculture and Open Space Element.*
- 2. Stay as far away as reasonable from production agriculture, commercial activities and residences.*
- 3. Be built to minimize impacts to sensitive resources.*
- 4. Provide signs that identify permitted trail uses; directions to relevant public areas; and, provide for safety and protection of trail users and adjacent private property.*
- 5. Provide trail fencing where necessary to discourage trespass onto neighboring land and to protect sensitive resources.*
- 6. Impose enforceable limitations on the trail use, as appropriate.*

*3.12 Where public lands are not available or adequate to accommodate a public trail, a trail dedication in easement or fee across private property shall be considered and may be obtained only in the following instances:*

- 1. From a willing seller or donor.*
- 3. As a condition of a project approval, subject also to Policy 3.13:*
  - a. For land designated Agriculture when:*
    - i. a general plan amendment would change the land use category from agriculture to another land use category; or*
    - ii. a discretionary project that would convert agricultural land to uses not related to agriculture.*

*i. a general plan amendment would change the land use category from agriculture to another land use category; or*

*ii. a discretionary project that would convert agricultural land to uses not related to agriculture.*

*b. For land not designated agriculture, but in agricultural production, when a discretionary project including a subdivision would convert land to uses not related to agricultural production, as determined by the County Agricultural Commissioner's Office.*

*3.13 When a trail dedication is required as a condition of a discretionary permit, the required trail dedication must:*

- 1. Be proportional to the level of development being proposed;*
- 2. Have an appropriate nexus to the effects of the permit.*

*3.15 The County shall fully indemnify, protect and hold harmless (including all costs and attorney fees) private property owners who dedicate or grant a public trail easement from, and against, those risks and damages that arise out of the usage of the trail easement by the public and which, in good conscience, should not be borne by the private property owner.*

*3.16 The County shall assure that if a public trail easement is abandoned, or if the liability acceptance is discontinued, the trail easement shall revert to the underlying property owner(s).*

### Sensitive Habitats and Species

The Salinas River corridor and oak woodlands found in the region are among the natural areas specifically identified for protection in San Luis Obispo County. The following are standard biological mitigation measures from Appendix F of the Parks and Recreation Element:

### Design/Site Selection Considerations

*A biological report prepared by a qualified professional (unless the Environmental Coordinator determines that the report is unnecessary) that recommends measures to avoid, and if not possible, to minimize or offset impacts to sensitive resources.*

*The required biological survey shall include:*

*Determination of baseline conditions and the locations and extent of major plant communities/habitat types and locations of special-status species;*

*Evaluation of the potential occurrence of sensitive plant and animal taxa at the proposed development site (related facilities, structures, and access roadways) and within the project area;*

*Identification of potential impacts to biological resources, focusing on impacts to special-status species and sensitive habitats; and*

*Development of a mitigation program to guide further study or to mitigate impacts.*

*Components of possible mitigation programs may include, but are not limited to:*

*Avoid known individuals of or habitat for sensitive plant and animal species. Do not install impediments (fences, structures, lighting) to wildlife corridors.*

*Along trails and throughout parks and recreational areas include signage displaying interpretive information and use regulations, including identification of sensitive habitat.*

*Limit access to sensitive areas; do not extend trail networks or provide single trails.*

### **Construction Considerations**

*Individual facilities may have any number of temporary impacts to biological resources. If the biological assessment identifies sensitive species, habitat, or potential for either, limitations may be placed on construction activity. Limitations shall avoid or minimize impacts to sensitive resources. Particular limits, in addition to those provided by any permits, if necessary, may include, but are not limited to:*

*Fencing of exclusion areas (riparian/wetland areas, sensitive plant populations) with highly visible temporary fencing prior to initiation of construction activity*

*Timing of construction to avoid high water periods, nesting seasons, etc.*

*Limitations on the duration/extent of grading to the extent feasible*

*In addition to any approvals required by other agencies (DFW, FWS), the ultimate construction activity program shall be subject to approval by the County Environmental Coordinator or her designee.*

### **Operational Considerations**

*Long-term impacts include those from recreational users, and those from maintenance activities. Where sensitive species or habitat are identified, the County shall include in the aforementioned mitigation program long term measures intended to protect such resources, including, but not limited to:*

*Guidelines for maintenance activities such as brush removal, removal of non-natives, and application of herbicides and pesticides which avoid or minimize such activities in areas of sensitive resources.*

*Maintenance of trail facilities, including closing emerging informal paths and installation of boundaries, if necessary, where users are straying from the formal trails*

### **San Luis Obispo County Bikeways Plan (2005)**

The San Luis Obispo County Bikeways Plan provides the blueprint for developing a bikeway system that includes both on- and off-street facilities, as well as support facilities and programs throughout the unincorporated County. The plan compliments bikeway plans prepared by other jurisdictions by identifying key connections to existing or planned bikeway facilities in these jurisdictions.

### **San Luis Obispo County Clean Air Plan (2001)**

The SLO County Air Pollution Control District's Clean Air Plan recommends several methods and options to reduce air pollution associated with vehicle miles traveled (VMT):

- *Voluntary Commute Options Program*
- *City transit improvements*
- *Regional transit*
- *Bicycling and bikeway enhancements*
- *Park and ride lots*

### **Templeton-Atascadero Bikeway Connector Trail Constraints Report**

The study addressed the area between Templeton and Atascadero parallel to Highway 101, Union Pacific Railroad (UPRR) and the Salinas River. Apart from Highway 101, there is no formal roadway or trail connection. There are disjointed pathways between the communities, but no cohesive trail or bikeway links. This lack of connectivity forces cyclists to use existing roadways carrying significant traffic and cyclists and pedestrians informally use the railroad tracks or other routes. The study concluded that within this area, several possible trail alignments could accomplish the basic goal of connecting Templeton and Atascadero with a Class I multi-use path.

Each of the three proposed alignment alternatives are composed of a collection of segments, with no single collection completely devoid of constraints. Based on this evaluation, Trail Alignment A was the preferred alignment. Of particular note is that this alternative proposes crossing the UPRR rail line at an existing crossing: "Based on discussions with UPRR, it appears that an overcrossing or undercrossing structure would likely be required to be consistent with the continued use of the rail line by UPRR." It would also require bridges at Paso Robles and Graves Creeks.





## 3.5.2 San Luis Obispo Council of Governments (SLOCOG)

### *San Luis Obispo County Regional Transportation Plan (2010)*

SLOCOG's *Regional Transportation Plan* (RTP) outlines the vision for transportation in SLO County through the year 2030. RTP goals include bicycle and pedestrian improvements and direct communities to:

- *Create and maintain a comprehensive interconnected, inter-county bikeway, trail and pedestrian system.*
- *Pursue plans to develop multi-use and Class I bikeways along appropriate coastal frontages, and other major recreational areas using utility, rail and roadway rights-of-way and abandoned railroad right-of-way throughout the region.*
- *Encourage the development of Class I Bikeways that travel through or connect to scenic areas or other recreation destinations.*
- *Encourage the development of boardwalks, recreation and multi use trails, which travel through or connect scenic areas or other destinations to promote walking and equestrian travel where appropriate.*
- *Encourage new development proposals to include bike racks, lockers, showers, Bike and Ride stops and safe interconnected pedestrian paths.*

## 3.5.3 City Plans

### *City of Paso Robles Bicycle Master Plan (2009)*

The *Paso Robles Bicycle Master Plan* specifically addresses both recreational and commuter cycling. The plan includes goals that establish what the City would like to achieve, policies to provide the guidance on how to achieve the goals and actions to direct the City's efforts. It includes a vision statement that a goal is to be a bicycle-friendly community and that the City will:

- *Establish better bicycle connections*
- *Integrate bicycling into schools*
- *Increase bicycle-related tourism*

Specific bicycle facility policies related to this plan include the following:

- *The City shall create bicycle facilities focused on the scenic qualities of Paso Robles, such as the Salinas River.*
- *Bikeways in these areas should minimize grading to the greatest extent possible.*
- *The City shall collaborate with local, regional, state, and federal agencies, and private entities...to ensure the Bicycle Master Plan is consistent with regional transportation plans and agency regulations.*

Note that virtually all mention of bicycles and related facilities in the *Paso Robles General Plan - Circulation Element* references the *Bicycle Master Plan*. (See Figure 3-1 for map from the *Bicycle Master Plan*.)

### *City of Atascadero General Plan (2002)*

The 2002 update of the *General Plan* addresses the planning and design of bicycle facilities, such as specific recommendations meant to improve cycling conditions. These include: "(a) *a comprehensive network of on and off road bicycle routes to encourage the use of bikes for commute, recreational and other trips, (b) provide trail heads to improve access to the Salinas River and historic Anza Trail.*"

### *City of Atascadero Bicycle Transportation Plan (2010)*

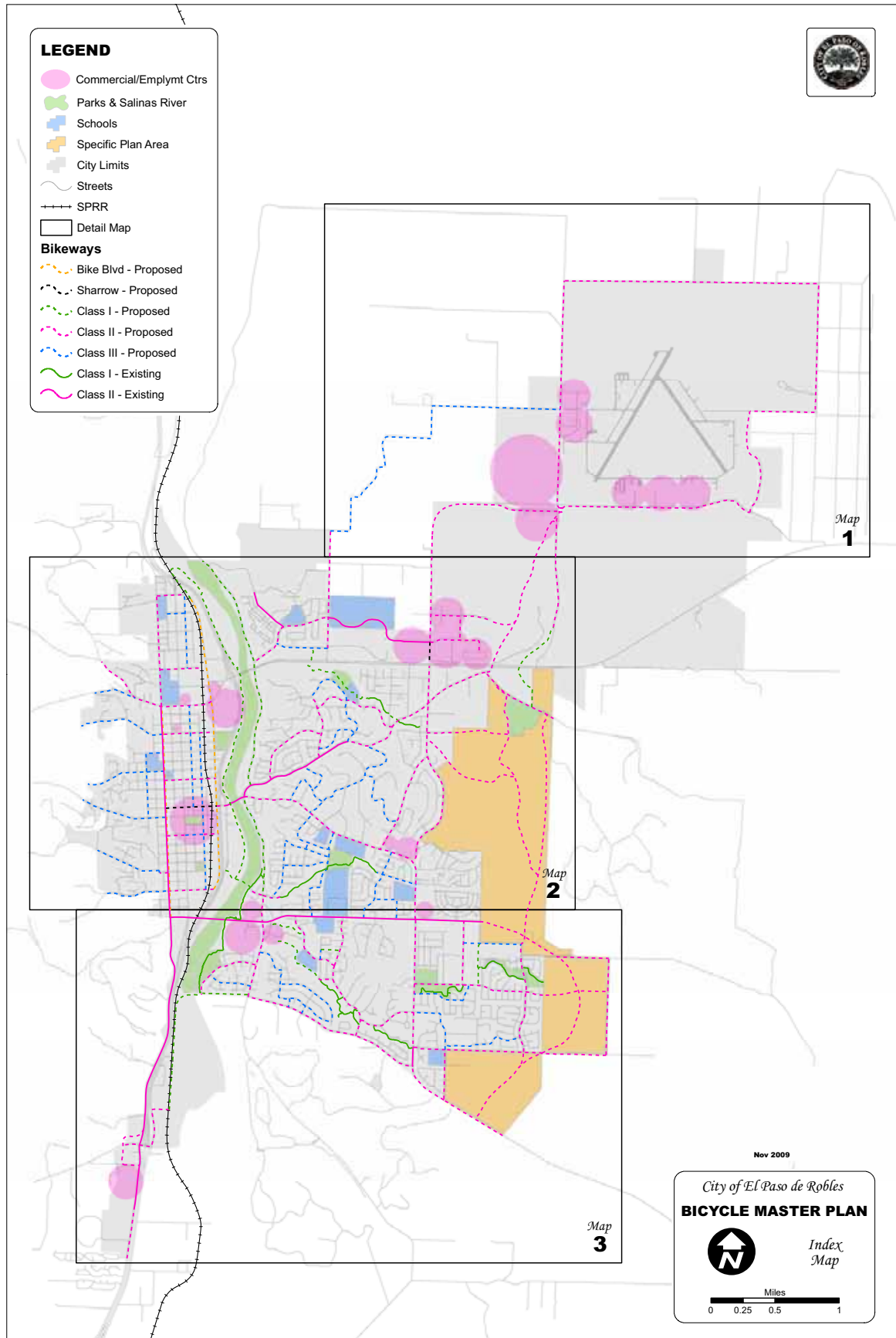
This plan's purpose is to provide a blueprint for the development of a comprehensive cycling system that facilitates bicycle transportation by community members, from children to seniors, both within the city of Atascadero, as well as to and from neighboring communities. The plan also aims at enhancing opportunities for recreational cycling, with the dual goals of encouraging recreational cycling by residents and making Atascadero an attractive destination for tourists (See Figure 3-2 for map from the plan).

Three and a half miles of the "De Anza Trail" along the Salinas River and rail line is listed first and as completed prior to 2000 in the plan's Table 1: Recently Completed Projects That Include New Bicycle Facilities.

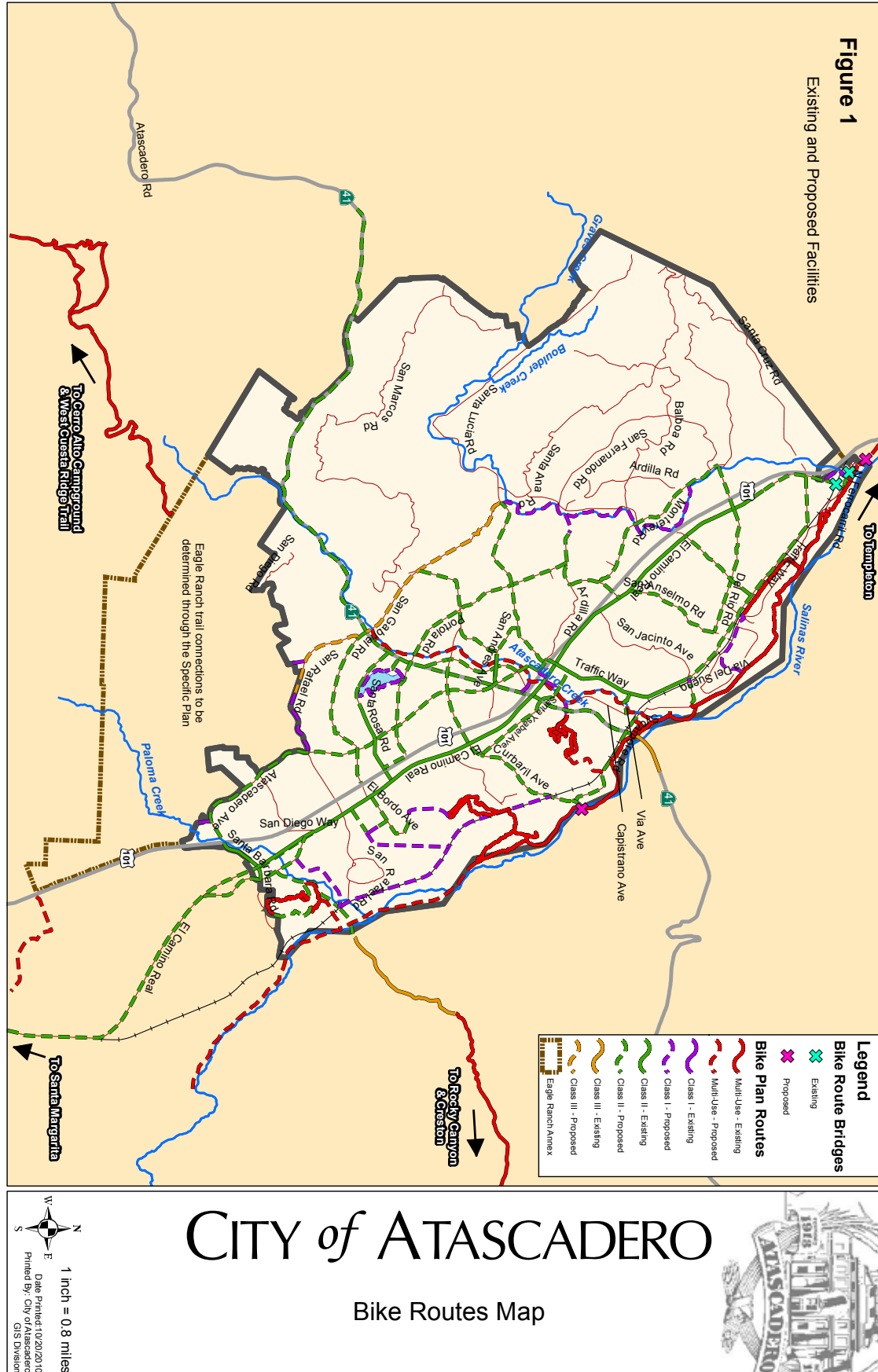
### *Templeton Community Plan*

This plan generally references the *County Bikeways Plan* for bicycle facilities and the *County Parks and Recreation Element* for equestrian and hiking trails. (See Figure 3-3 for map from the *General Plan*.)

# Figure 3-1: Paso Robles Existing and Proposed Bikeways

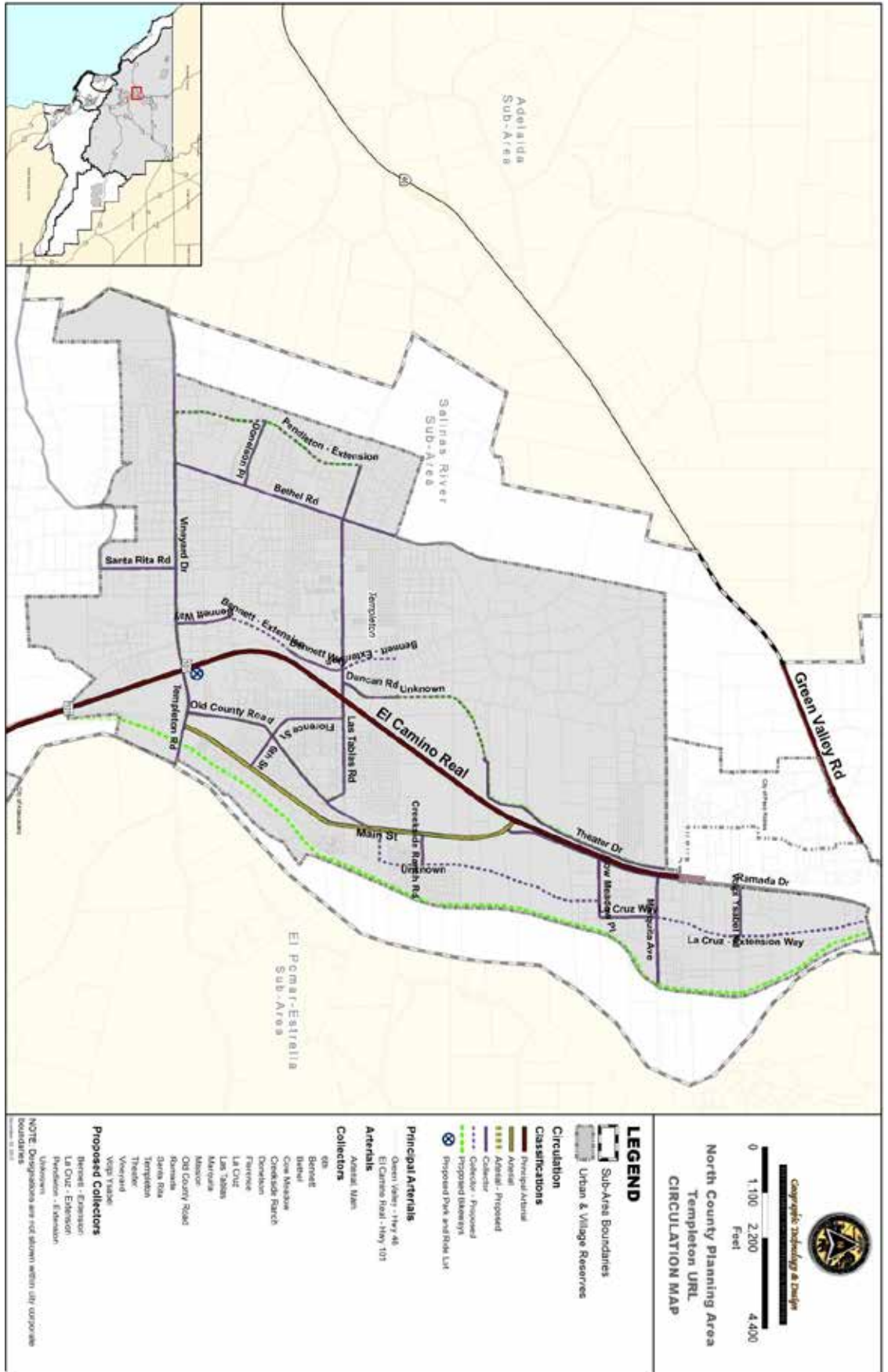


### Figure 3-2: Atascadero Existing and Proposed Bikeways





**Figure 3-3: Templeton Existing and Proposed Bikeways**





## 3.6 Shared-use Path Design

This plan addresses the desire for a “braided” trail design incorporating parallel paved and natural surface routes wherever possible. However, an emphasis on connectivity also drove planning for shared-use paths that serve as part of the transportation circulation system, as well as support multiple recreation opportunities, such as walking, cycling and in-line skating. Shared-use paths are typically surfaced with asphalt, concrete, or firmly packed crushed aggregate or decomposed granite. The AASHTO *Guide for the Development of Bicycle Facilities* defines a shared-use path as being physically separated from motor vehicular traffic with an open space or barrier. Shared-use paths should always be designed to include pedestrians even if the primary anticipated users are cyclists.

Since shared-use paths provide a transportation function, new shared-use paths should be built to accommodate people with disabilities. In addition, existing shared-use paths should be improved to enhance access whenever possible. If improvements to existing facilities cannot be made immediately, it is recommended that information, including signage, be provided at all path entrances. This information should clearly convey objective information to trail users, including data about grade, cross slope, surface and width.

### 3.6.1 Background

For most shared-use paths, cyclists are the primary user group. Cyclists include tandem, recumbent and hand powered three-wheelers. Road racing wheelchairs capable of reaching speeds of over 30 mph on downhill sections may use shared-use paths and have the same rights and privileges as cyclists. In many cases, the design requirements for cyclists are similar, if not more stringent, than the design requirements for pedestrians with disabilities. For example, people who use wheelchairs can travel over small changes in level. However, because cyclists are often traveling at higher speeds, smooth surfaces are needed. Although people with vision impairments can identify a three inch high edge protection in a path environment, edge protection lower than a 42 inch railing can be dangerous for a cyclist.

For this plan, the majority of the accessibility recommendations for shared-use paths are based on the AASHTO guidelines. Additional issues, such as protruding objects (not addressed in the AASHTO bicycle facility guide) are also included. However, grade recommendations in this plan are based on those developed by the Regulatory Negotiation Committee for Outdoor Developed Areas because the maximum grades identified for cyclists in the AASHTO bicycle facility guide do not satisfactorily address the needs of some people with mobility impairments.

### 3.6.2 Shared-use Path Access

Creating a shared-use path that provides access for people with disabilities involves more than the path itself. Ensuring that an accessible pathway leads to the shared-use path must also be considered and access points along the shared-use path should be accessible to people with disabilities. Also, the facilities around the trail should also be designed for access. For example:

- *Trail head and destination areas with parking and bathrooms should conform to ADAAG requirements for accessible parking and bathrooms.*
- *Elements, such as picnic areas, should be connected with a pathway that meets the accessible design recommendations for shared-use paths.*
- *Signage at access points should conform to ADAAG requirements for font size, font type and contrast.*

While pathways connecting with shared-use paths should provide the same accessibility standard as the path itself, tread width may be adjusted based on expected use levels.

### 3.6.3 User Group Conflicts

Shared-use paths attract a variety of user groups with potentially conflicting needs. For examples, pedestrians may be affected by sudden physical environment changes and by other trail users, such as cyclists, who generally travel at higher speeds. However, shared-use path conflicts are especially an issue for people who cannot react quickly to hazards, such as some of those with mobility impairments. To improve the shared-use path experience for all users, including people with disabilities, designers and planners should be aware of potential conflicts and employ innovative solutions whenever possible.

Conflicts can be reduced by:

- *Providing information, including signage, in multiple formats that clearly indicates permitted uses and rules of conduct*
- *Ensuring that the shared-use path provides sufficient width and an appropriate surface for everyone, or providing alternate paths for different types of users*
- *Providing sufficient separation for users traveling at different speeds (For example, if volume and space permits, cyclists and pedestrians should have different lanes or pathways.)*
- *Providing the necessary amenities for all users (For example, cyclists require bicycle racks or lockers.)*
- *Considering the needs of people with disabilities within all of the user groups permitted on the path (For example, many individuals with disabilities may use a longer hand cycle or wider tricycle design that may not be compatible with standard bicycle racks, bathroom stalls, or lockers of limited width. Longer and wider equipment may need additional maneuvering space in restrooms and when transferring from the chair to benches.)*

A “braided” trail system is proposed, meaning a combined paved and natural surface route network running parallel with each other. Wherever possible, they will meander some distance apart and native landscape material may be used to perceptually separate them. While primarily intended to improve overall user experience, this conceptual design emphasis also helps address potential conflicts.

County standards call for a physical barrier wherever the buffer between parallel natural surface trails serving equestrians and paved paths serving cyclists and pedestrians is less than four feet wide. This fencing could be supplemented and enhanced with native plantings. In some cases, plant material may be used in lieu of fencing, especially where visual separation is desired, where if enough buffer space is available.

### 3.7 Trail Facilities

Planned design features include bridges, trail heads, staging areas and vista points, as well as intersections, surface treatments, plant material, fencing, striping and signage.

#### 3.7.1 Trail and Paved Path Location Criteria

The plan intent is to provide safe and cost-effective parallel natural surface trails and paved paths wherever possible throughout the corridor. Plan design guidelines were established based primarily on Caltrans *Highway Design Manual (HDM) Chapter 1000 - Bikeway Planning and Design* for bike-ways and the County of San Luis Obispo *General Plan, Parks and Recreation Element, Appendix B – Trail Standards* for trails.

The bicycle facility alignments follow existing paths wherever possible, provided the existing paths meet the current design speeds and stopping sight distances as described for Class I multi-use paths in *HDM Chapter 1000*. The corridor’s trail alignments require some flexibility due to topography and other physical constraints. Design standards for natural surface trails were taken from the County of San Luis Obispo *General Plan, Parks and Recreation Element, Appendix B – Trail Standards*.

In the interests of safety and cost-effectiveness, typical sections were established that follow these standards. Trail types were developed specifically to take advantage of and to address local conditions and are described in Table 3-3 on the following page, along with their typical locations within the river corridor shown in Figure 3-4. The trail types are addressed further in Chapter 4, Master Plan Recommendations.

These design criteria were intended to enhance public welfare and safety and to minimize maintenance requirements, such as trail replacement after larger flood events. All paved trails and bridges are intended to be kept out of the flood plain and the compacted natural surface trails to be kept out wherever possible. Where necessary, fill would be used to raise the trail above the flood plain and protected with appropriate reinforcement, such as rip-rap or gabions.



*Gabion construction supporting shared-used trail along river subject to heavy seasonal flows - Santa Ana River Trail (Eastvale, CA)*



*Parallel buffered trails - Santa Ana River Trail (Eastvale, CA)*



*Bench construction supporting shared-use path under freeways along active river channel - Santa Ana River Trail (San Bernardino, CA)*



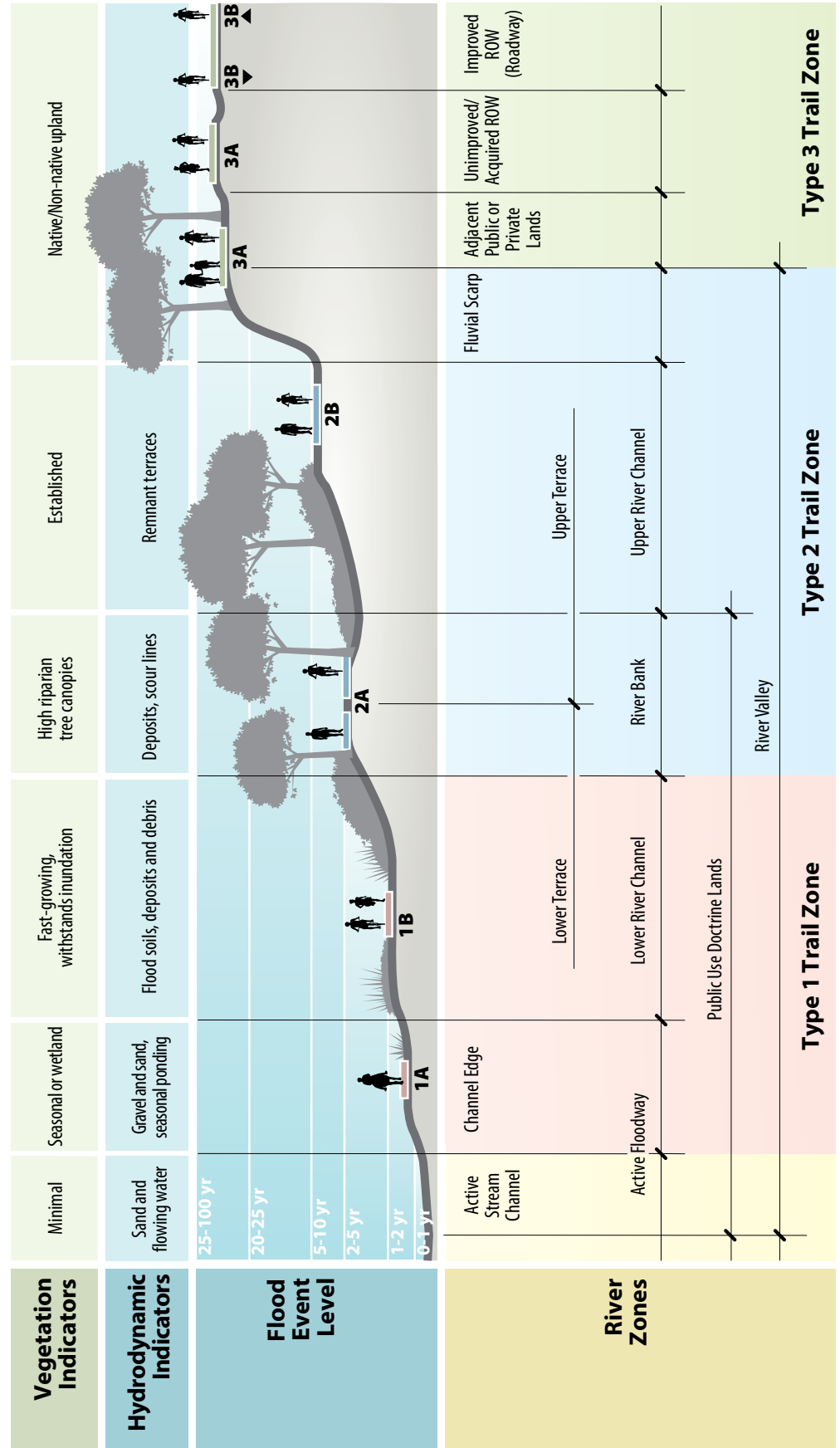
## Table 3-3: Typical Trail Standards

Trail Type	Description	Definition	Ideal Dimensions	Minimum Dimensions	Location Relative to River	Trail Construction Standards				Typical Easement Width
						Wear Surface	Base Course	Sub-grade	Stabilization	
<b>1A</b>	Natural Surface Trail in Active River Channel	Unimproved natural surface trail	6'	3'	Within active river channel	Unconsolidated native material only	N/A	N/A	N/A	N/A
<b>1B</b>	Firm Natural Surface Trail at River Channel Edge	Improved firm natural surface trail	6'	3'	At edge of river channel	Compacted native material/decomposed granite	N/A	N/A	Firm natural surface trail may employ binder	N/A
<b>2A</b>	Class 1 Path and Parallel Firm Natural Surface Trail on River Bank	Class 1 multi-use paved path and adjacent firm natural surface trail	12' paved with 2' clear zone on one side	10' paved with 1' clear zone on one side	On bank close enough to river to be overtopped by 5 year flood event	Paved path: 4" thick asphalt or concrete	Paved path: 6" thick Class II base, width + 6" each side	Paved path: Prepared and 95% compacted native material	Firm natural surface trail may employ binder	12-20'
			4' firm natural surface trail on opposite side	3' firm natural surface trail on opposite side		Firm natural surface trail: Compacted native material and/or decomposed granite	Natural surface trail: N/A	Natural surface trail: N/A		
<b>2B</b>	Class 1 Path and Parallel Firm Natural Surface Trail above River Bank	Class 1 multi-use paved path and adjacent firm natural surface trail	10' paved with 2' clear zone each side	May be split: One way = 6' Two way = 10'	Above bank but close enough to river to be overtopped by 10 year flood event	Paved path: 4" thick asphalt, concrete or concrete soil	Paved path: 6" thick Class II base, width + 6" each side	Paved path: Prepared and 95% compacted native material	Firm natural surface trail may employ binder	12-20'
			As available	As available		Firm natural surface trail: Compacted native material and/or decomposed granite	Natural surface trail: N/A	Natural surface trail: N/A		
<b>3A</b>	Class 1 Path and Firm Natural Surface Trail near River	Class 1 multi-use paved path and adjacent firm natural surface trail	12' paved with 2' clear zones each side	10' paved with 2' clear zones each side	High enough above river to be flooded by 100 year event only	Paved path: 4" thick asphalt, concrete or concrete soil	Paved path: 6" thick Class II base, width + 6" each side	Paved path: Prepared and 95% compacted native material	Firm natural surface trail may employ binder	15-25'
			8' firm natural surface trail	4' firm natural surface trail		Firm natural surface trail: Compacted native material and/or decomposed granite	Natural surface trail: N/A	Natural surface trail: N/A		
<b>3B</b>	Class 2 or 3 Bikeway on Roadway	On-street Class 2 bicycle lane or Class 3 bicycle route	6' Class 2 lane or Class 3 route in 14' curb lane	5' Class 2 lane or Class 3 in 12' curb lane	On paved roadway as close to river as possible	Bikeway: Existing asphalt or concrete street surface	N/A	N/A	N/A	N/A

### Notes:

- For clarity, paved routes are denoted as **paths** and natural surface routes are denoted as **trails**.
- Class 3 bicycle routes are signed, but may also employ shared lane markings ("SILMS" or "sharrows").

**Figure 3-4: Typical Trail Location**





## 3.7.2 Bridges

The Salinas River Trail Master Plan identifies several proposed bridge crossings that will create opportunities for overlooks, habitat protection, loop trails and trail connections to both sides of the river. Bridges provide maintenance and operational and emergency service access. River or subsidiary creek crossings will be needed in several places within the corridor and proposed bridge sites were explored during site investigations. Likely potential use, cost-effectiveness and physical constraints drove the selection of potential bridge locations.

All proposed bridges would be typical of those commonly used for trails and would be 12 feet wide. Should a wider multi-purpose bridge be desired to accommodate high use levels, or to support maintenance or patrol vehicles, it would be 20 feet wide and constructed to an appropriate load rating.

The following conceptual bridge criteria will serve as a guideline for the development of potential trail bridge crossings as identified in the master plan.

### Type

The recommended bridge types for the Salinas River Trail include the following:

#### Wood Trail Bridge

Along portions of the Salinas River Trail, a wood trail bridge may provide a cost-effective solution in bridging minor drainage crossings while supporting local trail character. Bridges should be level and avoid a step-up if the trail is intended to be ADA-compliant. Since wood's life span is limited, composite lumber may be considered as a feasible alternative for the required deck material. If the fall distance is greater than 30 inches, guard rails should be at least 42 inches higher than the bridge surface. Spans greater than 10 feet should generally be engineered and may require site-specific geotechnical work. It should be noted that long span wood construction requires similar requirements for abutments and foundation supports as steel trail bridges.



*Small-scale bicycle/pedestrian bridge (Millennium Trail - Park City, UT)*

#### Prefabricated Steel Truss Trail Bridge

The most common use of prefabricated steel truss bridges is for trail applications in conjunction with parks and trail environments. Prefabricated steel truss bridges may serve as a feasible alternative for selected crossings shown in the Salinas River Trail Master Plan. Such bridges can be used on relatively long spans of over 100 feet, with virtually unlimited spans possible with intervening supports. A successful installation of a prefabricated steel truss bridge crossing over the Salinas River can be found in King City, California.



*Prefabricated steel truss bridge (King City, CA)*



*Example wooden trail bridge*



*Large-scale prefabricated steel truss bridge (Moab, UT)*



Additional design considerations for prefabricated steel truss bridges include finishes such as weathered (Cor-Ten) steel, paint or galvanizing and deck options such as cast-in-place reinforced concrete, precast planks, open grating or composite or wood decking. Prefabricated steel truss bridges are available in a variety of design styles and truss types to accommodate project aesthetic and clearance requirements.

### Siting

Bridge siting will be determined by abutment constraints such as flood levels, river geometry and geomorphology, cultural resources, elevation differences and horizontal and vertical alignments. A geotechnical investigation is recommended for potential bridge crossing locations. Abutments and decks should be located outside of the flood flow wherever feasible. Areas of environmental concern, such as wetlands or sensitive species, should be identified as part of the bridge siting process. Prefabricated bridges create less environmental impacts than site-constructed types.



### Length

Throughout the proposed 35 miles trail corridor, the Salinas River varies in width and may require spans of 250 feet or more in several locations. Typically, the most cost-effective structures are those with horizontal alignments constructed perpendicular to the river or stream resulting in the shortest bridge spans. Bridge length will also be constrained by some of the siting constraints mentioned above.



### Width

All proposed bridges will be typical of those commonly used for trails and will be a minimum 12 feet wide. When a wider multi-purpose bridge is desired to accommodate high-use levels, or to support maintenance or patrol vehicles, bridges would be a minimum of 20 feet wide and constructed to the required load rating.



### Railing

AASHTO specifies that minimum pedestrian bridge railing height should be 42 inches high. Bridges designed for bicycle traffic and/or specific protection of cyclists, should be equipped with bicycle railings. If deemed necessary, rub-rails attached to the rail to prevent snagging should be deep enough to protect a wide range of bicycle handlebar heights. Vertical balusters are not recommended for railings designed to provide protection for bicycles since snagging of bicycle pedals or handlebars may occur.



### 3.7.3. Boardwalks

Boardwalk construction may be used to span sensitive areas such as stream riparian zones, unavoidable wet areas, depressions and in areas of steep slopes. They can also be used to provide trail access in areas where grading and filling may harm tree roots or create trail surfaces that wildlife will not cross. Boardwalks should be considered in relation to environmental impacts, available budget, potential user needs, operations and management issues. The following conceptual boardwalk criteria will serve as a guideline for the development of any boardwalks identified in the master plan.



### Materials

Proposed boardwalks must meet AASHTO design recommendations for paved shared-use paths. Boardwalks should be structurally designed to support the weight of a small truck or a light-weight maintenance vehicle. For boardwalk deck construction, wood lumber is typical. Composite lumber provides a longer useful life compared to wood, is a heavier weight material to reduce floating in flood prone sites and the pronounced texture can reduce slippery surfaces. While composite lumber is typically costs more than wood, its durability can make it more cost-effective over the life of the structure.

### Height from Ground

Boardwalk height should be set to allow for small animal movement under the structure, a minimum of six inches above grade. Footings will vary depending on soil conditions and a geotechnical investigation is recommended.

### Width

Boardwalk width should be a minimum of 10 feet when no rail is required. A 12 foot width is preferred in areas with high anticipated use and whenever rails are used. A 10 foot width is recommended only for low-use areas.

### Railings

Boardwalks less than 30 inches above grade may not require a railing according to current building standards, but curb rails are highly recommended. Paths higher than 30 inches above grade require a 42 inch high railing. It should be noted that AASHTO recommends 42 inch high railings on any structure or path more than 30 inches above adjacent grade.

### 3.7.4 Drainage Crossing Structures

The Salinas River Trail will require the design and construction of drainage crossing structures throughout the proposed alignment. To minimize potential drainage impacts, trail designs shall give careful consideration to ponding along property lines and the prevention of trail fill blocking existing drainage patterns. Trails should be designed so that no adverse drainage impacts result from construction. Drainage structures may require review and permitting from agencies such as the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers and the Regional Water Quality Control Board.

### Culverts

A culvert is a drain or pipe that allows water to flow under a road, railroad, trail or similar obstruction typically surrounded by soil. Culverts are generally smaller than bridges, ranging from small pipes to large reinforced concrete structures. Culverts should be provided at appropriate intervals and should be sized to convey appropriate drainage flows. A culvert can be a cost-effective solution in bridging a minor drainage crossing. Consideration should be given to providing design provisions such as rock edge and energy dissipaters to prevent downstream erosion due to the culvert clogging with debris and associated damage if flows overtop the trail.



## Causeways

Causeways are raised portions of trails that are useful in poorly drained soils or where seeps moisten soil tread. Paths are elevated above wet ground using a permeable fill material as a base. Path edges incorporate small boulders or rock rip-rap to contain the permeable fill. Adding rock and elevating the trail allows water to drain to the side and help prevent widening when users walk at the edge of damp areas. Design criteria for causeways should meet AASHTO and Caltrans design recommendations for paved shared-use paths. Path construction and detailing depends on water table and surface flows through the site. A stable base for paving must be established while allowing for water flow under the path. Base materials should be designed so as not to be compromised by future water flows. Fill must be firm mineral coarse-grained or granular material, or small, well-graded angular rocks. Causeways are not intended for use to cross wetlands.

### 3.7.5 Staging Areas

Staging areas should be provided at least at the ends of a trail. They should be sited above typical flood flows, including any future restrooms, and should provide users the following:

- *Shade trees (or optional shade structure)*
- *Seating (benches)*
- *Picnic tables*
- *Bicycle racks (no long-term storage)*
- *Fencing and hitching rail*
- *Small corral*
- *Water for dogs and horses*
- *Water for hikers, cyclists and riders*
- *Entry road drive and monumentation*
- *Interpretive and directional signage*
- *Trash receptacles*
- *Off-street parking for 20 cars, including six pull-through spaces for horse trailers*
- *Portable toilets (2) or as needed for special events*
- *Restrooms (optional)*
- *Minimal security lighting (optional)*
- *Large corral (optional)*

### 3.7.6 Trail Heads

A trail head is defined as a non-vehicular crossroads that function as a rest area and orientation point where two or more trails meet. It is typically smaller, accommodates less people and has fewer facilities than a staging area. Trail heads should provide users the following limited features:

- *Seating (benches)*
- *Picnic tables*
- *Trash receptacles*
- *Bicycle racks (no long-term storage)*
- *Hitching posts*
- *Water for horses and dogs*
- *Water for hikers, cyclists and riders*
- *Shade trees*
- *Interpretive and directional signs*
- *No parking*
- *Shade structure (optional)*

### 3.7.7 Turn Outs, Vista Points and Rest Areas

The trail corridor may have turnouts, vista points and rest areas. The criteria used for each are described below.

#### Rest Areas

Periodic rest areas are beneficial for all shared-use path users, particularly for people with mobility impairments who typically expend more effort to walk than other pedestrians. Rest areas are especially crucial when grade or cross slope demands increase. Rest area frequency should vary depending on the terrain and intended use and heavily used shared-use paths should therefore have more frequent opportunities for rest. Rest areas provide an opportunity for users to move off the trail, instead of remaining on the trail to stop and rest. If a rest area is only provided on one side of the trail, it should be on the uphill side. Having separate rest areas on both sides of the trail is preferred when there is a higher volume or higher traffic speeds. This reduces trail users' need to cross in front of other trail users moving in the opposite direction. In general, rest areas should have the following design characteristics:

- *Grades not exceeding five percent*
- *Cross slopes on paved surfaces that do not exceed two percent and cross slopes on non-paved surfaces that do not exceed five percent*
- *Firm and stable surface*
- *Width equal to or greater than the width of the trail segment leading to and from the rest area*
- *Minimum length of 60 inches*
- *Minimal change of grade and cross slope on the segment connecting the rest area with the main pathway*
- *Accessible amenity designs, where provided*





Seating can be particularly important for people with disabilities and who may have difficulty getting up from a seated position on the ground. Some seating should have backrests to provide support when resting and at least one armrest to provide support to help disabled users resume a standing position. Accessible seating should provide the same benefits as seating for users without disabilities. For example, providing space for a wheelchair facing away from an attractive view would not be appropriate.



*Example benches (Note that at least one armrest is recommended)*

## Turnouts

A turnout is defined as either a widened section of trail that allows faster traffic to pass or a side path that allows users to pull over and rest away from the main trail. Turnouts should have:

- Widened pathway
- Seating (bench)
- Shade trees and native vegetation
- Directional and/or mileage signs
- Trash receptacle
- Fencing as needed

## Vista Points

This is a type of turnout/rest area specifically focused on scenic views, overlooks and, for this plan, viewpoints significant to Chumash culture. Vista points will have similar features as turnouts. If located on a bridge deck, they will be more limited with only a widened pullout and, if room is available, a bench and signage. In general, interpretive signage may be especially appropriate at culturally significant Chumash viewpoints.

### 3.7.8 Shade Structures

A shade structure is an open frame design feature at a staging area, trail head or rest area. As part of this plan, a shade structure may be provided as an option at a staging area and at a trail head. However, wherever possible, shade is planned to be provided by trees, especially native species.



*Example shade structure*

### 3.7.9 Restrooms

A portable toilet is an interim facility that may be provided in the early years of a staging area's development. Portable toilets may also be brought in temporarily for special events. A restroom or comfort station building is an optional facility that may be provided at a later date at a staging area if demand warrants it.



*City park restroom building (Park City, UT)*



### 3.7.10 Fencing

While access control is generally not needed throughout the plan area, there are specific locations and conditions that may require it. Four general conditions have been defined, with applicable fencing standards.

**None Needed** - The majority of the corridor falls into this category.

**Low Security** - This is fencing that provides a minimal level of access control and is intended to blend with its surroundings in an aesthetic manner. It would be used in areas where trespass is not likely, but where adjacent uses, sensitive species or habitats would benefit from some assurance from disturbance. This fencing type would be wood with wood cross members or galvanized cable between the posts. It would be roughly waist high and at least 42 inches high if adjacent to shared-use paths.

**Medium Security** - This fencing would be used for more stringent access control, such as immediately adjacent to sensitive private properties or other land uses where more positive access control is desired. This fencing would be six feet tall and be designed to exclude humans and dogs. It could be standard galvanized chain link or may be coated if a less obtrusive appearance is desired. In general, matte black is the least visually intrusive compared to bare galvanizing.

A less costly alternative could be similar to the wildlife corridor deer exclusion fencing along State Highway 101 in the Cuesta Grade area that employs round pressure-treated timber posts interspersed with U-channel metal posts and infilled with galvanized mesh. For greater strength, this fence type could employ wood or metal framing or heavier gauge mesh.

**High Security** - This fencing would be eight feet tall and likely to be galvanized or powder-coated welded metal designed to be difficult to climb. This is usually accomplished with closely spaced vertical heavy gauge wire or very closely spaced horizontal wire, both of which eliminate the need for horizontal members that could provide hand or toe holds. Conventional picket fencing may also be appropriate. This fence type would be relatively costly and so would be used only where necessary due to adjacent land uses or hazards from which trail users must be restricted.



*Examples of low security fencing*



*Examples of medium security fencing*



*Decorative chain link fencing (Lace Fence Architectural Fabric)*



*Examples of high security fencing*



## 3.7.11 Plant Materials

Landscaping will be confined to developed areas along the trails, such as staging areas, trail heads, vista points and turn-outs. All planting should be regional native species. Trail features are planned to occur at fairly regular intervals along the corridor and native trees are planned as the primary shading method at these locations. Additional native shrub plantings should be incorporated into these locations to help integrate them with surrounding habitats and the nearby riparian ecosystem, as well as for visual screening where desired.



*Typical Salinas River corridor riparian vegetation - Common trees include willows, oaks and cottonwoods*

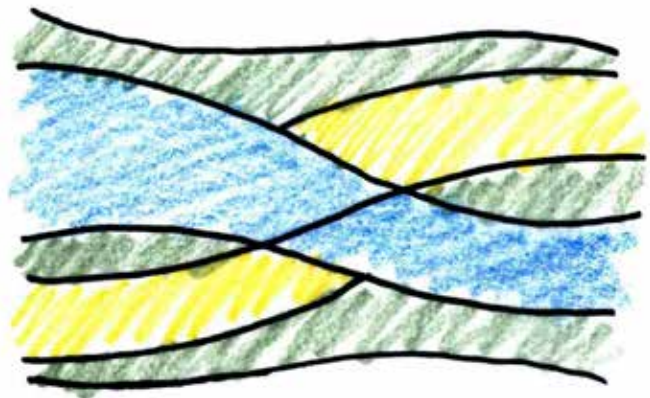
## 3.8 Signage and Trail Branding

A strong trail branding program for the Salinas River Trail will convey a uniform quality, credibility and experience to the users and communities it connects. Through the integration of graphics, signage, trail elements and amenities, it can visually enhance the trail experience, encourage trail usage and make trails more comfortable for the user. The Salinas River Trail Master Plan should implement the following branding guidelines.

### Braided River

The City of Paso Robles developed a branding effort during the Salinas River Vision, Follow the River Follow the Dream workshops held in 2005. The Salinas River runs through the heart of Paso Robles and has always been embraced by its citizens as a thriving corridor and a natural resource treasured for the wildlife habitats, native vegetation and its importance as open space and recreational area. During the workshop, a “braided river” graphic was developed and quickly became an image and brand with which the City strongly connected. Following the workshop, the “braided river” became the tag line and charge for the community to support efforts to re-connect with the corridor and begin to develop a network of recreational trails that engage it.

Salinas River Trail branding should reinforce the “braided river” concept. As additional communities embrace the concept of the braid, the trail can act as a spine weaving and bonding the Northern San Luis Obispo communities together by focusing on the shared natural resource of the Salinas River. Integrating the concept of the braid into site elements such as graphics, signage, trail elements and amenities will create consistency for the 35 mile trail experience.





## Juan Bautista de Anza National Historic Trail

Additional branding opportunities for the Salinas River Trail include the Juan Bautista de Anza National Historic Trail. The majority of the Salinas River corridor falls within the historical Juan Bautista de Anza Trail route, which provides the opportunity for visitors to experience the varied landscapes similar to those of the expedition. Through the use of interpretive signage along the trail, users can learn the stories of the expedition's events, the colonial settlements, the members and descendants of the expedition and grasp an understanding of the Native American cultures and their guidance on the expedition.



The Juan Bautista de Anza National Historic Trail project is growing as local, state and National Park Service efforts establish more trails, signage and interpretive programs. The Salinas River Trail has the opportunity to embrace the connection to the National Historic Trail and in doing so may obtain Federal designation and recognition for the historical route.



Trails that have established a clear thematic design/concept provide a consistency in message and a unity to the trail. Incorporating the branding in basic amenities such as site furnishings, fencing and gates, lighting, hardscape and structures, signage and art pieces help reinforce the Salinas River Trail brand or "sense of place." Some trail elements and amenities that can incorporate Salinas River Trail branding are described in the following sections.

### 3.8.1 Site Furnishings

Site furnishings such as drinking fountains, benches, shade structures, trash receptacles and bicycle parking can have design qualities that reinforce the theme for the Salinas River Trail. A family of furnishings creates continuity and reinforces the overall look and feel of the trail. There are a wide variety of options to choose from in terms of style and materials. Selections should be based on the desired trail theme, as well as cost.



### 3.8.2 Fencing and Gates

Fencing can serve multiple purposes along trail facilities, including access control, visual screening, channeling of trail users and reducing liability concerns. Several types of fencing and gates will be important along the Salinas River Trail and can help reinforce the desired trail theme and brand. Decorative fencing can add visual interest to a trail and could be used at gateway entrances or adjacent to neighborhoods. Artistic and decorative entrance features help to establish the trail as a unique and memorable place.





### 3.8.3 Lighting

Lighting allows certain parts of the trail to be used at night and provides safety for trail users. Lighting should be considered at entrances and exits of bridges, public gathering areas along the trail, trail access points and along street-based trails. Lighting should not be considered where nighttime use is not expected, next to sensitive wildlife habitat areas, or adjacent to residential area in darker rural areas of the proposed trail system.



How the Salinas River Trail appears at night can also reinforce overall trail branding. Matching or complimenting light fixture style and types with other site furnishings will strengthen the overall look and feel of the trail. Light color should be considered in the selection, since consistent color illumination will visually enhance and link the trail at night. All light sources should provide a warm white color light.

There are a wide variety of lighting options to choose from in terms of style and material selection, as well as energy efficiency. A licensed or qualified lighting expert should be consulted before making any lighting design decisions. Doing so can reduce up-front fixed costs and long-term energy costs. As appropriate, dark sky-compliant lighting should be selected to minimize light pollution cast into the sky while maximizing light cast onto the ground. Solar light fixtures should be utilized where possible for new installations or for retrofit projects.

### Crossings

Lighting is important to include at all roadway crossing locations for the comfort, safety and convenience of all roadway users. Lighting should be present at all marked crossing locations. Properly designed lighting provides cues to drivers to expect pedestrians and cyclists. FHWA HT-08-053, *The Information Report on Lighting Design for Mid-block Crosswalks*, found that a vertical illumination of 20 lux in front of the crosswalk, measured at a height of five feet from the road surface, provided adequate detection distances in most circumstances.

Although the research specifically addressed mid-block crosswalk placement, the report includes a brief discussion of considerations in lighting crosswalks co-located with intersections. The same lighting principles apply at intersections. Illumination just in front of crosswalks creates optimal visibility of pedestrians. Crosswalk lighting should also provide color contrast from standard roadway lighting.

### Energy Conservation

It is expected that lighting will be a part of project improvements and trail and some roadway or crossing lighting may be required. The use of energy-efficient Light Emitting Diode (LED) lighting fixtures should be considered for these applications. LED lighting is becoming an alternative illumination source to replace high pressure sodium vapor (HPSV) lighting. Rather than a single HPSV lamp, the LED type is an integrated module consisting of arrays of individual LEDs that can be arranged to distribute lighting levels as required for various trail and crossing widths and uses lenses or refractors to fine-tune light distribution.

LED efficiency benefits include long life (up to 100,000 hours) and reduced maintenance due to longer periods between lamp module replacements, but the greatest benefit is reduced energy consumption by as much as an estimated 60 percent when compared to comparable output HPSV lamps. LED can have a lifetime of 12-15 years and a cost recovery of around three years.

LED lighting can be used with various light fixtures for various applications. The benefit of lower energy consumption and reduced maintenance costs are very attractive and support the installation of LED lighting. Some objections have occurred because the intense white light was a surprising change from the warmer HPSV lighting people have grown accustomed to seeing. Measures can be taken to reduce the initial impact of LED lighting with lower wattage modules and dimming. Also, new LEDs are becoming available that have color similar to conventional lamps.

The following is a brief summary of advantages to using LED lighting versus conventional technology:

- *Low power consumption and reduced maintenance costs*
- *Dimming capability*
- *More accurate color rendering*
- *Quick turn on and restart*
- *Does not contain toxic lead or gas*
- *Ease of light spillage control where light is undesirable*
- *High output at low temperatures*

### Advanced Sensor Technology

While it is likely that LED sources will be specified for lighting improvements due to their efficiency and longevity, even more energy savings are now possible with “adaptive control” technology that automatically increases lighting levels only when needed. These systems typically employ centralized wireless networks, regardless of fixture type or application. A system like this is already in place at the University of California, Davis.

As a user approaches, a motion detector in each fixture wirelessly triggers it to raise its light level to maximum. At the same time, a signal is sent to other fixtures in line on the path. Using a patented direction-of-travel function, light level is progressively brought up ahead of the user moving along the path. As adjustable time delays elapse behind the user and if no other motion is detected, lighting drops back to standby levels. The system also compares sensor data across the wireless network. In this way, it can accurately predict user speed and path-of-travel to light the way forward.

Lighting schedules can be easily adjusted to meet changing needs, or to guide users along preferred routes. Based on logs of specific location use rates, facilities personnel can further increase energy savings by fine-tuning light levels. Additional energy savings may be possible in the winter, for example, when fewer users may be expected. The system also automatically alerts maintenance personnel when problems are detected, which saves time and energy for repair crews, while potentially improving safety.

Preliminary data from UC Davis indicates that the adaptive aspect of the new “smart” lighting system has achieved energy savings of 60 percent or greater, on average, than what a static installation would have yielded. LED lighting technology is particularly suited to adaptive control since it does not appreciably degrade with repeated on-off cycling or dimming.

### 3.8.4 Paving Patterns

Hardscape surfaces design qualities can be used to reinforce the Salinas River Trail theme. Concepts that should be considered include a consistent use of materials, trail finishes, color, stamp and score patterns. There are a wide variety of options to choose from in terms of style and materials. Selections should be based on the desired trail theme and cost. Also, it is likely that the level of design would be higher at nodes such as trail heads.







## 3.8.5 Trail Structures

Trail structures such as retaining, seat walls, shade structures and other physical enhancements can have design qualities that reinforce the Salinas River Trail theme. Concepts that can be investigated include a consistent use of materials, form, finishes and color. There are a wide variety of options to choose from in terms of style and materials. Selections should be based on the desired trail theme and cost.



## 3.8.6 Public Art

Creative applications for an inspirational river art program that provides beauty and learning opportunities along the river will help reinforce the Salinas River Trail brand or a “sense of place.” Local artists can be commissioned to provide art for the trail system, making it unique, entertaining and memorable. Themes should draw from the local natural and cultural environment. Many trail art installations function as or are incorporated into signs, benches, shelters, or even the pavement surface. Public art projects will require design and placement approval by the jurisdiction it is located within.

Along the 35 miles of the Salinas River Trail, branding variations may occur because the communities and agencies may want to develop their own unique message. If this is the case, designers should consult with the specific agency parks department to determine whether specific colors, details or other design elements have been used consistently for completed portions of trails. Designers should also review completed portions of trails to determine whether a theme can be derived and applied from existing improvements.

## 3.9 Signage and Markings for Traffic Control and Wayfinding

Signs that clearly describe the shared-use path conditions are an essential component to enhance pedestrian access. Signs should be provided in an easy-to-understand graphic format with limited text. Providing accurate, objective information about actual shared-use path conditions will allow people to assess their own interests, experience and skills and to determine whether a particular shared-use path is appropriate or provides access to them with their assistive devices. Providing users with shared-path condition information is strongly recommended for the following reasons:

- *Users are less likely to find themselves in unsafe situations if they understand the demands of the shared-use path before beginning.*
- *Frustration is reduced and people are less likely to have to turn around on a shared-use path because they can identify impassible situations, such as steep grades, before they begin.*
- *Users can select shared-use paths that meet their skill level and desired experience.*
- *The level of satisfaction increases because the user is able to select a shared-use path that meets his or her expectations.*
- *If more difficult conditions will be encountered, users can prepare for the skill level and equipment required.*

Objective information about the shared-use path conditions (e.g., grade, cross slope, surface, width, obstacles) is preferable to subjective difficulty ratings (e.g., easier, most difficult). Because subjective ratings of difficulty typically represent the perceptions of the person making the assessment, the ratings may not be accurate or appropriate for the full range of shared-use path users. Individuals with respiratory or heart conditions, as well as individuals with mobility impairments, are more likely to have different interpretations of shared-use path difficulty than other users.

A variety of information formats may be used to convey objective shared-use path information. The format type should conform to management agency policy. Written information should also be provided in alternative formats, such as Braille, large print, or an audible format. For example, the text of a shared-use trail head sign can also be made available using digital means. In addition, simplified text and reliance on universal graphic symbols will provide information to individuals with limited reading abilities.

The type and extent of the information provided will vary depending on the shared-use path, environmental conditions and expected users. It is recommended that the following information be objectively measured and conveyed to the user through appropriate information formats:

- *Shared-use path name*
- *Permitted users*
- *Path length*
- *Elevation change over total length and maximum elevation obtained*
- *Average running grade and maximum grades that will be encountered*
- *Average and maximum cross slopes*
- *Average tread width and minimum clear width*
- *Surface type*
- *Surface firmness, stability and slip-resistance*

Project signage may include directional, destination, distance, regulatory/advisory and interpretive. Directional and other typical signage will occur primarily at staging areas, trail heads and anywhere users may conveniently intersect the corridor.

Trail distance markers may occur on a regular interval of at least once per mile and more likely every half mile. These markers are useful to first responders to locate injured persons.

Interpretive signage may occur almost anywhere to coincide with a point of public interest, but will likely be more condensed at the staging areas, trail heads and vista points where users are more likely to spend time off the actual trail surface resting or enjoying the view.

For all but regulatory signs, the signage for this corridor should be comprehensively designed as a definitive signature element that ties the experience of this segment together with the rest of the San Luis County trail system, as well as the rest of the Anza Historic Trail.

A comprehensive system of signage ensures that information is provided regarding the safe and appropriate use of all trails, both on-road and off-road. Signage should establish consistency for the style, font and colors used on all signage and to present a unified appearance to promote reorganization and branding of the Salinas River Trail as a unified system.

There are three basic types of signs proposed for the Salinas River Trail: regulatory, wayfinding and interpretive. Presently, the Salinas River Corridor has a variety of existing trail signage plans that have been developed over the years. For all but regulatory signs, the signage for this corridor should be comprehensively designed as a definitive signature element that ties the experience of this segment together with the rest of the San Luis County trail system and the Anza Historic Trail.

### 3.9.1 Regulatory

The Salinas River Trail network should be signed seamlessly with other alternative transportation routes, such as bicycle routes from neighboring jurisdictions, trails, historic and/or cultural walking tours, and wherever possible, local transit systems. Regulatory signage should conform to the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) and the *AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities*.

Regulatory signs should state the rules and regulations associated with trail usage, as well as identify the managing agency, organization or group. The message of trail regulations is to promote user safety and enhance the enjoyment of all users. It is important to post trail use regulations at trail heads and key access points with signage as well as with the use of trail maps and informational materials.

#### Typical Trail Regulation Signs:

- *Route identification, reassurance and confirmation*
- *Guidance and distance to trail destinations and key points of interest*
- *Safety features and user safety*
- *Warnings of known hazards*
- *Hours of use*
- *Pedestrian, bicycle and vehicular traffic control*
- *Dogs are not permitted on the trails*
- *Dog leash requirements*
- *Alcoholic beverages are not permitted on trails*
- *Notice of restrictions where use control is necessary*
- *Do not wander off of trail onto adjacent properties*
- *Protection of resources*

Trail signage should also be coordinated with county and city-wide networks. The final striping, marking and signing plan for the Salinas River Trail through Northern San Luis Obispo County will be resolved in the design phase and should be reviewed and approved by a licensed traffic engineer or civil engineer.

### 3.9.2 Wayfinding

A comprehensive signage system ensures that information is provided regarding the safe and appropriate use of all trails, both on-road and off-road. Signage should establish font and color consistency and present a uniform character to promote the Salinas River Trail as a unified system. There is not a designated font for signs, although informational text on signs should use sans-serif fonts when possible.



#### Juan Bautista De Anza Route Signs

Since the majority of the Salinas River corridor falls within the historical Juan Bautista de Anza trail route, it is an opportunity for visitors to experience the varied landscapes similar to those of the expedition. Integrating the National Historic Trail Route signage along the trail and trail heads will provide recognition for the historical route.

#### Guide Signs

Mainly within the public right-of-way, bicycle routes are identified through route signage using the standard "Bike Route" sign. The CA MUTCD allows for an alternative bicycle route sign to reflect a numerical route or name designation. Supplemental signs and plaques can be used to direct cyclists and pedestrians to destinations (e.g. "Salinas River Trail," "To Downtown Templeton").



#### Directional Signs

Directional and other typical signage will occur primarily at staging areas, trail heads and anywhere users may conveniently intersect the corridor. Direction signs provide route and distance information to major destinations and trail amenities. Directional signs should be installed at access points and major trail intersections. Supplementary informational decals may be added to directional signs at the discretion of individual agencies.



*Directional signage (Park City, UT)*

#### Trail Markers

Trail markers provide visual reassurance that one is on the designated Salinas River Trail. Trail markers can also double up as distance markers and may occur on a regular interval of at least once per mile or every half mile. These markers are useful for recreational purposes as well as for providing first responders a means to locate injured persons.





## Kiosks

Kiosks provide visitors with information to orient themselves, learn of site opportunities, read the rules and regulations of the site, find the hours of operation and read about local events such as activities programmed for the Salinas River Trail. Kiosk design and style should be in concert with the character and branding developed for the of the Salinas River Trail sign system. The kiosk should be readily identifiable by trail users as an information contact station and provide elements such as bulletin boards, regional trail maps, rules and regulations and accessibility advisories.



### 3.9.3 Interpretive and Educational

Interpretive signs enhance the trail or bikeway experience by providing information about the history and culture of the area. Signs may discuss local ecology, people, environmental issues and other educational information. Educational information may be placed at scenic view areas or in relation to specific elements being interpreted. They may take on many forms including textual messages, plaques, markers, panels and demonstrations.



Interpretive signage may occur almost anywhere to coincide with a point of public interest, but will likely be more condensed at the staging areas, trail heads and vista points where users are more likely to spend time off the actual trail surface resting or enjoying the view. Because interpretive signs need to relate directly to the needs of a site, no specific guidelines have been established for their format. However, interpretive signs should be concise and an integral part of an overall area sign plan, including the wayfinding signs mentioned previously.

## 3.10 Trail Surface Considerations

### 3.10.1 Natural Soft Surface Trails

Trails within the flood plain will simply be the naturally occurring surface material, typically a mix of loose sands and fine to coarse gravels, routinely altered by seasonal flows.



### 3.10.2 Firm Natural Surface Trails

Unpaved trails outside the flood plain will typically be surfaced with locally sourced compacted crushed stone. Crushed stone is a visually attractive and permeable material that can be relatively easily repaired following seasonal flood events and lends itself well to most trail uses.





## 3.10.3 Paved Hard Surface Paths

Paved paths will typically be asphalt, but may be concrete. Since bicycles are easily deflected by surface irregularities, care must be taken to maintain a smooth surface and to avoid longitudinal gaps. Striping or other surface markings must be non-skid paint or tape designed for the purpose. A regular sweeping plan will be necessary, especially wherever a paved path must be installed low enough to accumulate debris from winter storm flows, such as dipping down to pass under a bridge. Since they will be inundated more often than other segments, these specific locations may be more durably constructed with concrete.

Surface condition is a significant factor in how easily a person with a disability can travel along a shared-use path. The accessibility of the shared-use path surface is determined by a variety of factors including:

- *Surface material*
- *Surface firmness and stability*
- *Slip-resistance*
- *Changes in level*
- *Size and design of surface openings*

There are various surface materials that can be used in outdoor environments.

Shared-use paths are generally paved with asphalt or concrete, but may also use prepared surfaces such as crushed stone or soil stabilizing agents mixed with native soils or aggregates. Popular trails passing through developed areas are commonly surfaced with asphalt or concrete to maximize surface longevity and to support uses such as cycling and in-line skating, as well as ADA compliance.



*Concrete*



*Colored concrete*



*Pervious concrete*



*Colored and textured concrete*



*Asphalt*



*Polymer stabilized crushed rock*



Shared-use path surfacing material significantly affects which user groups will be capable of negotiating the terrain. Shared-use paths surfaced with crushed aggregate are unusable by in-line skaters and reduce cyclists' speed.

Paved surfaces should be provided in areas subject to flooding or drainage problems, in areas with steep terrain and in areas where cyclists or in-line skaters are the primary users.

### **Surface Firmness, Stability and Slip-resistance**

Shared-use path surface firmness, stability and slip-resistance affects all users, but is particularly important for people using mobility devices such as canes, crutches, wheelchairs, or walkers.

Firmness is how a surface resists deformation by indentation when a person walks or wheels across it. A firm surface would not compress significantly under the forces exerted as a person walks or wheels on it.

Stability is the degree a surface remains unchanged by contaminants or applied force so that when the contaminant or force is removed, the surface returns to its original condition. A stable surface would not be significantly altered by a person walking or maneuvering a wheelchair on it.

Slip-resistance is based on the frictional force necessary to permit a person to move across a surface without slipping. A slip-resistant surface does not allow a shoe, wheelchair tires, or a crutch tip to slip when crossing the surface.

Shared-use paths should have a firm and stable surface because when a person walks or wheels across a surface that is not firm and stable, energy that would otherwise cause forward motion instead deforms or displaces the surface or is lost through slipping. A slip-resistant surface reduces the possibility of a person's shoes, crutch tips, or tires sliding across the surface.

Asphalt and concrete are firm and stable in virtually all conditions. Other shared-use path materials, such as crushed stone or decomposed granite, are also firm and stable under most conditions, especially if compacted. To improve natural firm surface longevity, polymer-based bonding agents may be considered.

Under dry conditions, most asphalt and concrete is fairly slip-resistant. Shared-use paths should be designed to be slip-resistant during weather conditions typical for the region. *U.S. Access Board Technical Bulletin #4* addresses slip-resistance in further detail.

### **Abrupt Level Changes**

Changes in level are defined as the maximum vertical change between two adjacent surfaces. Problematic examples that may occur along shared-use paths include uneven transitions between the path surface bridges or walkways, cracks caused by freezing and thawing, or a change in the natural ground level (often caused by seismic activity or tree roots).

Although abrupt level changes are not desirable for people with mobility impairments, they are potentially even more of an issue for cyclists and in-line skaters. Abrupt changes can cause pedestrians to trip and fall. The risk is particularly acute for those who have difficulty lifting their feet off the ground or who have limited vision and may be unable to detect the level change. Catching a wheel on an obstacle or level change can easily tip wheeled devices as the individual's momentum continues forward despite the wheels having suddenly stopped. Minimizing or eliminating abrupt level changes will greatly improve shared-use path safety for all users.

For paved shared-use paths, the following recommendations should be followed:

- *Vertical level changes should not be incorporated in new construction*
- *If unavoidable, small level changes up to a quarter inch may remain vertical without edge treatment*
- *A beveled surface with a maximum slope of 50 percent should be added to small level changes between a quarter and a half inch*
- *Level changes such as curbs exceeding half an inch should be ramped or removed*

### **Openings**

Openings are spaces or holes in the paved tread surface. On recreation trails, openings may occur naturally, such as a crack in a rock surface. On paved shared-use paths, however, openings are usually constructed, such as spaces between the planks of a boardwalk that allow water to drain from the surface. A grate is an example of an opening that is a framework of latticed or parallel bars that prevents large obstacles from falling through a drainage inlet but permits water and some sediment to pass through. Another example of an opening is a flangeway gap at a railroad crossing.

If at all possible, openings should not be within the paved shared-use path surface.

Openings, such as drainage grates, should be located outside the paved shared-use path tread. Wheelchair casters or walkers, crutch and cane tips, in-line skate wheels and narrow road bicycle tires can get caught in poorly placed grates or gaps, creating a serious safety hazard.





When placing openings in the shared-use path cannot be avoided, employ the following specifications:

- *Width* - The size of the open space should not permit a half and inch diameter sphere to pass through the opening. If a wider gap is unavoidable because of existing design constraints, it may be acceptable to extend the width to a maximum of three quarters of an inch.
- *Orientation* - If the open space is elongated, it must be oriented so that the long dimension is perpendicular to the dominant direction of travel.

### Paved Shared-use Path Grade and Cross Slope

People with mobility impairments find negotiating steep grades difficult because of the additional effort required to travel over sloped surfaces. Manual wheelchair users may travel rapidly downhill, but will be significantly slower uphill because more energy is required to traverse sloped surfaces than level surfaces. Powered wheelchairs use more battery power on steep grades because they compensate for the difficult terrain. Also, both powered and manual wheelchairs are less stable on sloped surfaces, particularly if wet (or frozen).

Steep running grades are particularly difficult for users with mobility impairments when resting opportunities are not provided, but even less severe grades that extend over longer distances may tire users as much as shorter, steeper grades.

In general, running grades on paved shared-use paths should not exceed five percent and the most gradual slope possible should be used. If steeper segments are incorporated into the shared-use path, the total running grade exceeding 8.33 percent should be less than 30 percent of the total trail length. In general, the lengths of the steep sections should be minimized and kept free of other access barriers.

Because negotiating a steep grade requires considerable effort, users should not be required to exert additional energy to simultaneously deal with other factors, such as steep cross slopes and vertical level changes. When designing maximum grade segments, the following recommendations should be used:

- 8.3 percent for a maximum of 200 feet
- 10 percent for a maximum of 30 feet
- 12.5 percent for a maximum of 10 feet

Note that although the recommended maximum grades are similar to those recommended in the 1999 AASHTO *Guide for the Development of Bicycle Facilities*, the maximum distances are significantly shorter.

Near the top and bottom of the maximum grade segments, the grade should gradually transition to less than five percent. In addition, rest intervals should be provided within 25 feet of the top and bottom of a maximum grade segment. Rest intervals may be located on the shared-use path, but should ideally be located adjacent to the path for the safety of all users. Well-designed rest intervals should have the following characteristics:

- *Grade not exceeding five percent*
- *Cross slopes on paved surfaces not exceeding two percent and cross slopes on non-paved surfaces not exceeding five percent*
- *Firm and stable surface*
- *Width equal to or greater than the width of the path segment leading to and from the rest interval*
- *Minimum length of 60 inches*
- *Minimum change of grade and cross slope on the segment connecting the rest interval with the shared-use path*

### Cross Slope and Drainage

Severe cross slopes can make it difficult for wheelchair users and other pedestrians to maintain their lateral balance because they must work against the force of gravity. Cross slopes can cause wheelchairs to veer downhill and create problems for individuals using crutches who cannot compensate for the height differential that cross slopes create. The impacts of cross slopes are compounded when combined with steep grades or surfaces that are not firm and stable.

Cross slope can be a barrier to people with mobility impairments. However, some cross slope is necessary to drain water quickly off of shared-use paths. The negative effect cross slopes have on pedestrian mobility must be balanced against the necessity of including cross slopes to provide adequate drainage. The minimum cross slope necessary should be used for paved shared-use paths. For asphalt and concrete, a cross slope of two percent should be adequate. For non-paved surfaces, such as crushed aggregate, the maximum recommended cross slope is five percent.

## Shared-use Path Width

The width of the shared-use path tread not only affects pedestrian usability, but also determines the types of users who can use the path. Factors such as the movement patterns of designated user groups should be considered. For example, skaters may use a lateral foot motion for propulsion wider than the stride of most pedestrians. In addition, shared-use paths should be designed to accommodate high-speed users in both directions.

Shared-use path tread should be at least 10 feet wide. A minimum of eight feet may be used on shared-use paths that will have limited use. Shared-use paths should also have graded areas at least two feet on either side of the path. On shared-use paths with heavy volumes of users, tread width should be increased to a range from 12 to 14 feet. (These width guidelines reflect both state and federal standards.)

## Passing Space

Generally, passing spaces are not necessary on paved shared-use paths because path width exceeds the recommended dimensions that require a passing space. If a paved shared-use path is narrow, periodic passing spaces of at least 60 x 60 inches should be provided.

## Protruding Objects

Protruding objects are anything that overhangs or protrudes into the shared-use path tread whether or not the object touches the surface. Examples of protruding objects include light posts, poorly maintained vegetation and signs. People with vision impairments who use guide dogs for navigation are able to avoid obstacles in the pathway up to 80 inches high. Objects that protrude into a shared-use path but are higher than 80 inches tend to go unnoticed because most pedestrians require less than 80 inches of headroom.

People with vision impairments who use long white canes to navigate can easily detect objects on shared-use paths below 27 inches. However, objects that protrude into the pathway between 27 inches and 80 inches are more difficult to discern because the cane will not always come in contact with the object before the pedestrian comes in contact with the object.

Ideally, objects should not protrude into any portion of the clear tread width of shared-use paths. If an object must protrude into the travel space, it should not extend more than four inches. Also, a vertical clearance of eight feet should be provided rather than the 80 inches needed for pedestrians, to accommodate other shared-use path users, such as cyclists. On shared-use paths where there is the potential for emergency or maintenance vehicles access, it may be necessary to increase the vertical clearance. In addition, when an underpass such as a tunnel is used, 10 feet of vertical clearance is recommended.

## Railings

Low forms of edge protection, such as curbs, are not recommended on shared-use paths because of the negative impact they can have on cyclists. If edge protection is needed, it should be a railing with a minimum height of 42 inches. In some situations, it may also be beneficial to provide a gripping surface for pedestrian use in addition to the protective railing. If a handrail is included as part of the railing design, it should meet the specifications in ADAAG 4.26.

## 3.11 “Non-standard” Bicycle Facilities

There are a number of “non-standard” bicycle facilities that may be useful in specific situations. According to the FHWA, any treatment intended to regulate, warn or guide traffic (vehicle drivers and cyclists) that serves more than just an aesthetic purpose is considered a traffic control device and regulated at the federal level by the FHWA and are codified in the *Manual on Uniform Traffic Control Devices* (MUTCD). California own version (CA MUTCD) is overseen by Caltrans and the California Traffic Control Devices Committee (CTCDC). Both MUTCDs are responsible for defining the standards used to install and maintain traffic control devices on all public and private roads open to public traffic. In California, anything not specified within the CA MUTCD is considered not approved for use on roadways.

For bikeway facilities not yet included in the CA MUTCD, the City should consult Caltrans for locations within state right-of-way or when utilizing BTA funding. For other locations or funding sources, a FHWA request for experimentation is recommended: (<http://mutcd.fhwa.dot.gov/condexper.htm>).

The CA MUTCD states that traffic control devices must conform with *California Vehicle Code* (CVC) Section 21401, which requires Caltrans to adopt uniform standards and specifications for traffic control devices. Although Caltrans does not control local traffic control devices (unless they are on state facilities) or enforce compliance with the California MUTCD (except indirectly through funding), any agency that installs a noncompliant device, contrary to the CVC, potentially exposes itself to liability.

However, the CA MUTCD does provide a means for Caltrans and local agencies to experiment with non-approved devices. The agency can request CTCDC approval prior to experimentation, which is defined as “...research involving testing, evaluating, analyzing or discovering the effect of a specific device, principle, supposition, etc., usually carried out in an operational context.” The CTCDC may either approve the device for limited use on an experimental project, approve the device for limited use in a formal research project, disapprove it until further justification is submitted, or disapprove it altogether.



The CA MUTCD provides specific guidelines for experimental proposals, including a detailed description of the experimentation, locations, number of projects, a proposed plan of study, time periods, CTCDC approved-evaluation criteria and reporting. If the experiment results in a proposed change to the CA MUTCD, recommended text should be included.

All proposals must list the agency sponsoring and conducting the study and the name and titles of principal researchers. There must be proof of professional traffic engineering capabilities and other related professional expertise to perform the experimentation and related evaluation processes.

At the end of the experimental period, all installations must be removed, unless the CTCDC grants an extension or permission for continued operation. Caltrans policy is that all experimental proposals that involve bicycle-related issues are referred to the California Bicycle Advisory Committee (CBAC) for discussion before consideration by the CTCDC. This procedure is not part of the California MUTCD and CBAC approval is not a condition for CTCDC approval.

The following facilities now being used in California are essentially embellishments of the existing three approved facility types.

#### Cycle Track

A cycle track is a combination bicycle lane and shared-use path. It is essentially a bicycle lane, but with its conventional positioning between the travel lane and vehicle parking switched to between the parking lane and the curb. It can be either one- or two-way, depending on roadway configuration, intersections and adjacent land use. It is generally a separate facility when adjacent to a pedestrian walkway, as well as physically protected from adjacent vehicle travel lanes. The physical separation from the roadway can employ parked vehicles, planting areas, bollards, raised lanes or a combination of these elements. These treatments reduce the risk of conflicts between cyclists, pedestrians and parked vehicles.

Cycle tracks may be installed on urban streets with high vehicular volumes and speeds, but to minimize conflicts, selected streets should have long blocks with few to no driveways or other mid-block vehicle access points. Additional signage, traffic control treatments and pavement markings may be needed to direct cyclists along the cycle track and through intersections. Cyclist safety through intersections must be carefully addressed, especially for two-way cycle tracks.



*Cycle Track - One Way (Upper image illustrates buffered and colored configuration and lower illustrates raised configuration)*

#### Buffered Bicycle Lane



















Buffered bicycle lanes are similar to standard Class II facilities, but provide additional marked buffer space on one or both sides of the bicycle lane. An emerging standard is to buffer bicycle lanes on roadways with speed limits exceeding 40 mph, though the buffered width can vary, depending on location and traffic volumes.





(✓ indicates likely to be used in study area)

**Figure 3-5: Potential Path and Trail Types**

SEPARATED FROM TRAVEL LANE			LOCATED NEXT TO TRAVEL LANE			LOCATED IN TRAVEL LANE			LOCATED AWAY FROM ROADS		
<b>1a</b>	Multi-Use Path with Guardrail Barrier from Roadway (Class 1)	✓	<b>2a</b>	Standard Bike Lane (Class 2)	✓	<b>3a</b>	Standard Bike Route (Class 3)	✗	<b>4a</b>	Separated Single-use Path (Class 1)	✗
2'-4' barrier with 2' soft surface shoulder	10'-12' lane with dashed centerline	2' graded soft surface shoulder		4'-6' marked lane with symbols			Part of a 13'-16' travel lane		4'-6' walkway with 4' buffer	8'-10' lane with dashed centerline	2' shoulder striped buffer
											
<b>1b</b>	2 Way Bike Only Cycle Track with Raised Curb Barrier (Class 1)	✓	<b>2b</b>	Outside Buffered Bike Lane (Class 2)	✓	<b>3b</b>	Bike Sharrow (Class 3)	✗	<b>4b</b>	Separated Multi-use Path (Class 1)	✓
	10'-12' lane with dashed centerline	2'-3' wide 6" 9" tall Raised Curb	2' buffer stripe	4'-6' lane with symbols			Part of a 11'-14' travel lane		buffer zone with 2' graded shoulder	10'-12' lane with dashed centerline	2' graded soft surface shoulder
											
<b>1c</b>	2 Way Bike Only Cycle Track with Parking, Stripe or Barrier (Class 1)	✗	<b>2c</b>	Inside Buffered Bike Lane (Class 2)	✓	<b>3c</b>	Painted Shared Lane with Sharrows (Class 3)	✗	<b>4c</b>	Parallel Bike Path & Soft Surface Trail (Class 1)	✓
7' parking 4' buffer stripe	10'-12' lane with dashed centerline	2'-3' striped buffer with candlestick		4'-6' lane with symbols	2' Stripe		5'-6' painted lane with symbols			10'-14' hard surface path	2'-6' meandering side trail
											
<b>1d</b>	1 Way Bike Only Cycle Track with Parking Buffer (Class 1)	✗	<b>2d</b>	Dual Buffered Lane (Class 2)	✓	<b>3d</b>	Bike Boulevard (Class 3)	✗	<b>4d</b>	Highly compacted Surface Multi-use Path (Class 1)	✓
	4'-6' painted lane with symbols	2'-3' striped buffer with candlestick	2' Stripe	4'-6' lane with symbols	2' Stripe		11'-14' travel lane		none	2'-6' soft surface uncompacted hiking or equestrian trail	none
											
<b>1e</b>	1 Way Bike Only Cycle Track with Post Barrier or Raised Path (Class 1)	✓	<b>2e</b>	Painted Bike Lane (Class 2) can be near or in travel lane	✗	<b>3e</b>	Multi-Way Boulevard (Class 3)	✗	<b>4e</b>	Soft Surface Trail (unclassified / no bike facility)	✓
2' buffer stripe with candlesticks	4'-6' lane with symbols			5'-6' painted lane with symbols			11'-14' frontage road with parking lane		none	2'-6' soft surface uncompacted hiking or equestrian trail	none
											



## Bicycle Boulevard

Bicycle boulevards are relatively low speed streets designed to give priority to bicycle traffic by discouraging cut-through vehicle traffic while allowing local access. They improve cyclist comfort and safety by assigning right-of-way to the bicycle boulevard at intersections, with traffic controls to help cyclists cross major roadways, as well as an overall distinctive look to make cyclists more aware of the existence of the bicycle boulevard that also helps alert vehicle drivers that the street is a priority cycling route.

Bicycle boulevards are intended to support relatively light motor vehicle traffic volumes due of the traffic calming features installed to slow or divert vehicle drivers to other more appropriate routes. For example, intersections typically have physical diverters with bicycle cut-outs that allow cyclists to pass through unimpeded, while allowing vehicle drivers to enter to park or access a property, but without being able to continue.

Most bicycle boulevards employ distinctive pavement markings both to help identify them and to encourage riders to use the full lane to support parity between cyclists and vehicle drivers. They are also generally maintained to higher road surface standards than other streets. Because their traffic calming features improve pedestrian safety, as well as encourage cycling, the implied bicycle specificity of these routes is now often de-emphasized by designating them as “calmed, green or quiet” streets, or “neighborhood byways” or “parkways.”



*Bicycle Boulevard - Example intersection (Note cyclists have their own lane and signal heads to help them cross the busier street)*

## Green Transition Lanes

The FHWA has given interim approval for green colored pavement within bicycle lanes in mixing or transition zones, such as at intersections and in other potential conflict zones where motor vehicles may cross a bicycle lane. They are intended to warn vehicle drivers to watch for and to yield to cyclists when they encounter them within the painted area. The FHWA found that both vehicle drivers and cyclists have a favorable impression of green colored bicycle lanes. Cyclists felt safer while riding on green bicycle lanes, while vehicle drivers felt that green bicycle lanes helped increase their awareness of cyclists in the area. FHWA studies have also shown that green bicycle lanes improve cyclist positioning as they travel across intersections and other conflict areas.

Jurisdictions within California must notify Caltrans before proceeding with green bicycle lane projects because the agency is required to maintain an inventory, but since Caltrans has requested to participate in this interim approval, the process has been streamlined because FHWA experimental treatment protocol is no longer required.



*Green Transition Lane (Note associated regulatory signage R4-4)*

### Bicycles May Use Full Lane Sign (R4-11)

Another important change is a new sign for use along streets designated as Class III routes that advise all users that cyclists are allowed the full use of travel lanes. These read “Bicycles May Use Full Lane” (BMUFL) and are generally placed in conjunction with Shared Lane Markings (“sharrows” or SLMs). These signs will generally replace the yellow and black bicycle symbol diamond and associated “Share the Road” placard, which were warning signs only. The new BMUFL signs are white and black, the colors used for full regulatory signage. These signs, along with SLMs, allow cyclists to legally avoid the “door zone” within what the *Uniform Vehicle Code (UVC)* defines as a substandard width lane, or a “lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the same lane.” According to the MUTCD, a BMUFL sign may be used in addition to or instead of a SLM to inform all road users that cyclists may occupy the travel lane.



BMUFL Sign (R4-11) and associated shared lane marking

### Hybrid Facilities (Context-sensitive Solutions)

Hybrid facilities blend components of established facility types to take advantage of some specific benefit inherent to those components that better addresses a specific location’s issues. For example, where there is insufficient roadway width for Class II lanes both ways, it may be advisable to install a Class III bicycle route on one side of a roadway and a Class II lane on the other. Where there is significant slope, the uphill direction should be the Class II lane.



Example Hybrid Facility - Class III Bicycle Route with “Sharrows” downhill and Class 2 Bicycle Lane uphill

## 3.12 Unstable Slopes and Erosive Areas

The *Parks and Recreation Element* includes the following:

### *Slope Limitations for Grading and New Structures*

*No grading or structures shall occur on slopes greater than 20 percent (except in the case of trails) unless the County finds that there is no feasible alternative or that by allowing such grading or structures, the overall impacts would be better minimized. Grading shall be designed so that landform alterations are minimized to the extent feasible and blend with the natural topography by following existing contours where feasible.*

Note that while trails are exempt from grading restrictions in the previous excerpt, it is considered best design practice to limit trail grades wherever possible. This reduces construction impacts and costs, as well as long-term maintenance. In addition, most users will go out of their way to avoid steep trail segments, whether they are using it for transportation or recreation.

In general, trails should be limited to five percent, with steeper grades for short segments, if necessary. In any case, topography along the Salinas River within the majority of this trail corridor allows for reasonable grades. In those areas where topography is particularly challenging, trail routing should be carefully considered to determine if less steep alignments exist. If no other workable routes can be found, appropriate engineering considerations must be addressed to limit grades to five percent overall. These may include substantial constructed components, such as retaining walls and boardwalks.

## 3.13 Access and Restricted Areas

As noted previously, the *Parks and Recreation Element* recommends fencing where necessary to protect sensitive resources. While fencing generally works, it can also actually draw attention to an otherwise concealed resource. If the expressed intent is to keep trail users on the trail, other methods may be more effective, especially careful site design that maximizes the user’s trail experience, which fencing can significantly degrade. In particular, trail design can be manipulated to limit visual access and even to direct views away from sensitive resources. Among the site design characteristics that can be applied are trail alignment (horizontal and vertical) and vegetation. Fencing can therefore be regarded as a last resort.





## 3.14 Floodway Issues

The proposed Salinas River Trail may encroach upon the Federal Emergency Management Agency (FEMA) floodplain and/or floodway boundary. Therefore, evaluation of proposed trail impacts may be warranted.

The National Flood Insurance Program (NFIP) regulations for floodplain management are outlined in the *Code of Federal Regulations, 44 CFR Chapter 1*. FEMA NFIP regulations pertaining to floodway encroachments and corresponding allowable increases in water surface elevations are outlined in *44 CFR §60.3(d), 44 CFR §65.6, 44 CFR §65.7 and 44 CFR §65.12*.

In summary of these sections, increases in water surface elevations resulting from encroachments upon an adopted regulatory floodway are approvable by FEMA if the following criteria are met.

- *Submittal of a Conditional Letter of Map Revision (CLOMR) to the community and to FEMA prior to construction activities occurring within the floodway*
- *An evaluation of alternatives that do not result in an increase in base flood elevations, demonstrating why these alternatives are not feasible*
- *Documentation of individual legal notice to all impacted property owners*
- *Concurrence of any other communities affected by the proposed encroachment*
- *Certification that no structures are located in areas which would be impacted by the increased base flood elevation*
- *A request for revision to the base flood elevations (as part of the CLOMR process)*
- *Request for a floodway revision (as part of the CLOMR process)*

Following completion of any construction project or drainage improvement located within or impacting the FEMA floodplain, the project will be required to submit a *Letter of Map Revision (LOMR)* request to FEMA pursuant to 44CFR§65.3 to update the floodplain mapping to reflect project construction.

In addition to FEMA regulations, the local governing agency for which the proposed trail segment is located may require additional evaluation of the project impacts. Therefore, the project applicant should coordinate with governing agency to determine the flood control requirements.

## 3.15 Designing Trails to Maximize User Experience

The various groups expected to take advantage of a long distance route such as the Salinas River Trail represent a range of desired experiences. For example, bicycle commuters are likely to prefer relatively straight and contiguous routes, while recreational riders are likely to be less concerned with efficiency and speed. Motorized uses such as ATV and dirt biking may not co-exist well with equestrian use due to noise and speed issues, but equestrians can and do successfully share trails with walkers. While not a concern for mountain bikers, road cyclists demand smooth paving due to their narrower tires that can be easily deflected by obstacles or surface irregularities. Depending on individual preference, joggers and runners may use either paved or natural surfaces. The “braided” trail concept is intended to satisfy as many user group desires as possible.

From a “high altitude” corridor mapping perspective, most Class I shared-use pathways appear to be quite straight and many are actually constructed this way, even when it was not necessary. While connectivity is a key design criterion for such pathways, careful design can support a better user experience that can make the pathway a more memorable experience users will want to repeat. Physical layout literally shapes the pathway user’s perspective.

The issue is that most pathway users’ preference is for alignments that prevent them from being able to see too far down the pathway from any specific point. This occasional long distance view obstruction creates a sense of mystery that piques users’ interest and subconsciously encourages them to keep moving forward. This is especially important for children, in whom this is most pronounced. Basically, good design helps prevent boredom.

In practice, pathway design should therefore avoid excessively long straight alignments, and even where only minimal curves can be accommodated, they should be accentuated with landscaping, such as tree groupings inside the curves. These plantings subconsciously suggest a reason for the pathway’s curvature, as if the trees were already there and the path had to bend around these vegetated areas. This helps to make the path appear to be part of a pre-existing natural landscape. These tree plantings could also support seating areas under the canopies, as well as interpretive panels, which encourage users to stop and contemplate their surroundings in shaded comfort off the trail.

In some locations, the pathway’s vertical curvature could also be accentuated for short sections. The combination of horizontal curvature and subtle vertical curvature can be made particularly effective by placing the horizontal curves at the lowest point of vertical curves.

Finally, in some locations, parallel routes serving different user types may be advised. For example, for a corridor likely to serve primarily commuters and fitness riders, a wider, straighter alignment could be installed, while a parallel but narrower and more meandering route could be installed for recreational cycling, walking and running. Even the amount of shading can be used to help direct users to the more appropriate route. Such perceptual cues can reinforce wayfinding and help to keep “sign pollution” to a minimum.

These modifications will, of course, only be feasible to the extent they fit within designated corridors and can accommodate adequate sight distances. However, even subtle side-to-side and up-and-down variations are noticeable to most users, along with shade trees and views, which combine to help make their trail experience more memorable. Such segments tend to become user favorites and therefore generate more use within overall trail systems.

The images on this page illustrate well-designed, shared-use path examples from throughout the country. Table 3-4 on the following page describes user experience for each trail type.



*The Ridges - Neighborhood Trail (Grand Junction, CO)*



*Forks Connector Trail (North Augusta, SC)*



*Santa Ana River Trail - Anaheim, CA*



*Millennium Trail (Park City, UT)*



## Table 3-4: Trail Experience

Trail Type	Location Relative to River	Experience Focus	Category	Bicycle Facility Type	Trail Width		Surface Type	Trail Users Supported							Inundation	Trail Form	Amenities	Sample Image
					Ideal	Minimum		Commuter and Club Cyclists	Recreation and Family Cyclists	Mountain and BMX Riders	Nature Walkers and Hikers	Speed and Dog Walkers	Strollers and Skaters	Equestrians				
1A Explorer Experience	"On the River" (Within Channel)	Exploring an area, finding open water, crossing the river	Unimproved natural surface path	N/A	6'	3'	Native sand or soil				✓			✓	Damaged annually, 1-2 year event likely to remove some portions	Braided, linear or looped, cross river	None	
1B Natural Experience	"Along the River Floor" (Lower Terrace)	Exploring an area, being under tree canopy, smells and views of nature	Improved firm natural surface path	N/A	6'	3'	Compacted soil and/or decomposed granite (May employ binder)			✓	✓	✓		✓	Overtopped by 2 year event, damaged by 5 year event	Braided, linear or looped	Flexible trail markers (i.e. Carsonite® posts)	
2A Linear Experience	"On the River Banks" (Between Upper and Lower Terraces)	Views, exercise, movement, socializing, conversation	Multi-use hard surface trail	Class 1 multi-use path with wide, natural surface, side trail	2'+12'+4'	1'+10'+3'	Asphalt, concrete or concrete soil (Native soil with binder)	✓	✓	✓	✓	✓		on side path	Overtopped by 5 year event, requires maintenance after flooding, damaged by 10 year event	Point-to-point backbone	Kiosks, benches, trash receptacles, bike racks, educational signage, trail markers, landscaping	
2B Near River Experience	"Above the River Bank" (Upper Terrace)	Views, exercise, movement, socializing, conversation	Multi-use, hard surface trail	Class 1 multi-use path with limited width, natural surface, side trail	2'+10'+2'	May be split: One-way = 6' Two-way = 10'	Asphalt, concrete or concrete soil (Native soil with binder)	✓	✓	✓	✓	✓			May be overtopped by 10 year event, damaged by 25 year event	Point-to-point backbone	Kiosks, benches, trash receptacles, bike racks, educational signage, trail markers, landscaping	
3A Alternative Path Experience	"Path Near the River Valley"	Connecting through community, following the corridor, getting to the trail	Hard surface, separated-use, off-street path and adjacent firm natural surface trail	Class 1 multi-use path	Trail = 8' Class 1 = 2'+12'+2'	Trail = 4' Class 1 = 2'+10'+2'	Asphalt or concrete	✓	✓	✓		✓	✓		Not likely to be flooded except by 100 year event	Combined with on-street routes and lanes, bypass loops or direct connections	Kiosks, benches, trash receptacles, bike racks, educational signage, trail markers, landscaping	
3B Alternative Road Route Experience	"Road Near the River Valley"	Exploring an area, finding open water, crossing the river	Hard surface, on-street route and adjacent off-street firm natural surface trail	Class 2 lane or Class 3 route	Trail = 8' Class 2 = 6' Class 3 = 14' (Curb lane)	Trail = 4' Class 2 = 5' Class 3 = 12' (Curb lane)	Asphalt or concrete	✓	✓	✓		✓	✓			Combined with on-street routes and lanes, bypass loops or direct connections	None other than route signage or markings	





# Salinas River Trail Master Plan



Recommendations

4





# Recommendations

This chapter describes the recommended improvements and alignments that will comprise the future Salinas River Trail. These recommendations are the direct result of interpreting the project vision and goal statements, applying the design standards, understanding the existing conditions and attempting to resolve the corridor's constraints and taking advantage of the opportunities. More importantly, they are a direct result of public and agency input, as well as reflect key stakeholder's comments and specific suggestions.

The SRT will serve many types of trail users and will pass through a number of physical settings and jurisdictions. In all cases, parallel routes serve different user types, primarily depending on their preferred surface type. The SRT will be a "braided trail" that connects the main trail with other destinations, adjacent looped trails and visitor-serving amenities.

The primary transportation goal of the project is to accommodate road and commuter cyclists (bicycles with higher pressure and narrower road tires that require a firm surface) along the entire 35 mile length of the study area. Another important goal was to accommodate equestrian uses from Santa Margarita to San Miguel on soft surface trails. All other users, including walkers, hikers, joggers and mountain bikers, would utilize portions of both the firm surface and soft surface trails.

Walkers, hikers and most joggers are not likely to travel a high percentage of the route based on limitations of the distance likely to be covered in a typical one hour period. This timeframe would yield a distance from two to three miles maximum, depending on walking speed. For runners, a five to seven mile distance is reasonable, given an eight to twelve minute mile running pace. A mountain biker using the firm surface trails could make the majority of the distance in a four hour ride, but because of their loop back requirements, would likely only cover half of the full 35 mile distance. An equestrian user interested in overnight camping could make the full length of the 35 mile route in a two day period. However, most would cover 15-20 miles in one long riding day. Only a serious cyclist could make the full distance up and back in a five to six hour ride. So the majority of users would be most interested in out-and-back segments or looped trips of much shorter duration. This indicated the need for shorter looped trails and parallel routes using multiple surfaces.

## 4.1 Master Plan Design Policies and Objectives

The master plan objectives listed below complement the project's overarching goals, objectives and principles documented in Appendix C. In all cases, trail route and design should be refined and resolved through the processes and criteria established by area plans, easement conditions and environmental regulations and permits, as described in Chapter 2: Setting, Chapter 3: Design Standards and Guidelines, and Chapter 5: Action Plan.

The following objectives were used to help select the primary direct routes and should be used when selecting and refining the final routes:

- 1. Align the trail or path as close as possible to the river edge while avoiding sensitive resource areas and construction that would impact scenic views, or involve construction of significant facilities within active flood zones.*
- 2. Use existing trail and path alignments whenever possible to minimize additional disturbance and intrusion into the river habitat. Close existing trails in sensitive areas or that may otherwise cause impacts and are redundant with the primary trail experience.*
- 3. Select route and design alternatives that create the least amount of change.*
- 4. Align and design trails and facilities to minimize maintenance requirements.*
- 5. Use local materials, recycled materials and products, and other sustainable trail design techniques.*
- 6. Generally maintain a 25 foot setback from any river bluff edge for new unpaved trails. Determine a reasonable setback for paved paths incorporated into the trail network, as needed depending on construction techniques, such as retaining walls.*
- 7. Separate pedestrian alignments from roadways, and if near a roadway, such as on bridges or roadway shoulders, provide a barrier between vehicles and trail or path users.*
- 8. In general, avoid the use of culverts for crossing wet areas and drainages, unless they are quite small. Otherwise, trail bridges are preferred.*
- 9. Provide trails to take people where they want to go, with a range of riverine environmental experiences and viewpoints, subject to the limits of sensitive resource protections and public access.*





*10. Provide safe, convenient connections across barriers, such as creeks, major roads, the rail line, and across the river, to connect the trail to activity areas and destinations.*

*11. Provide or identify the support facilities that people will need to make effective use of the trail such as parking/staging areas, restrooms, maps and signs for information, guidance and environmental education.*

*12. Provide a continuous bicycle route by creating a Class 1 multi-use pathway, and by designating on-street routes on local streets or roadways as necessary, as well as routes on existing or new pathways.*

*13. Coordinate with Caltrans to plan, implement, and protect the SRT as a part of the transportation system. While the SRT is consistent with Caltrans' Complete Streets policy, it is not considered within a State Route unless it is physically located within such a roadway's road-of-way. The SRT can provide important and well-used connections for typical trips for work, school and retail. Some of the segments can provide inter-community connections while some of the longer connections can provide intra-community connections, especially between Atascadero, Templeton and Paso Robles.*

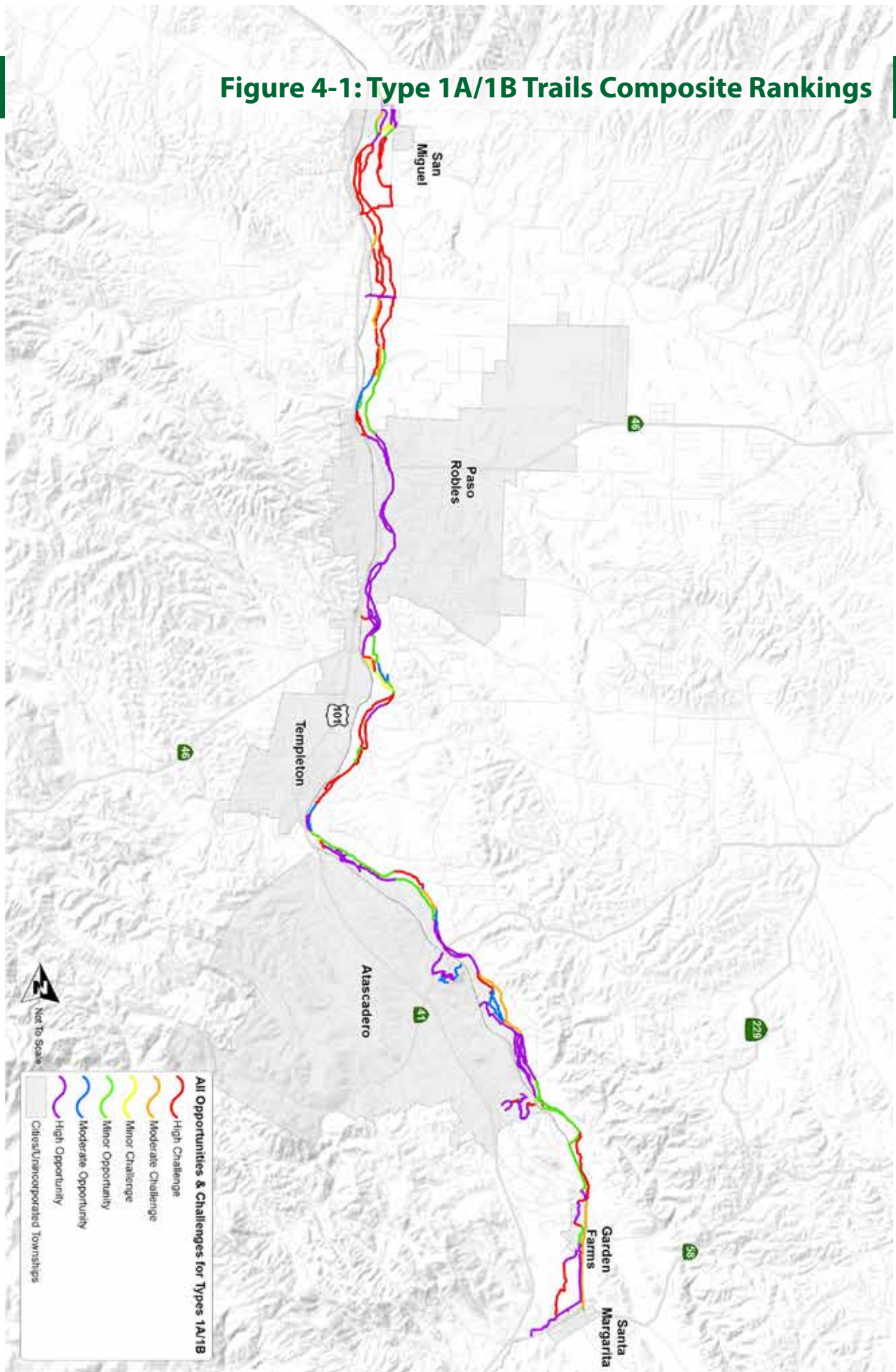
*14. This master plan does not designate trail uses for specific trails. Specific use designations and regulations are left up to the managing agencies, per their standards and the pertinent regulations and agreements. Trail use types are discussed to some extent in conjunction with specific reach descriptions.*

### 4.2 Initial Identification and Ranking of Alternative Trails

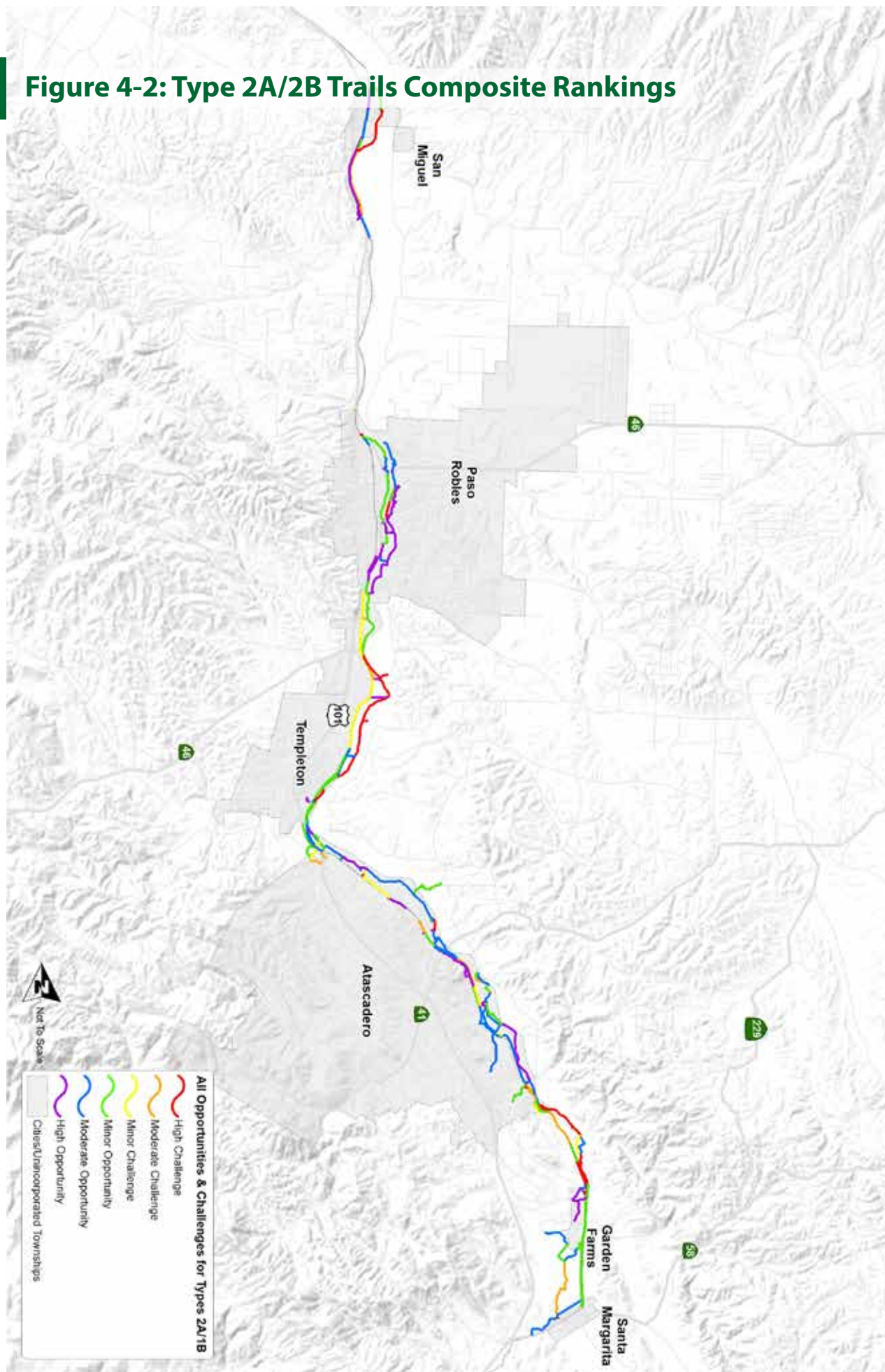
Based on the results of the overlay mapping of constraints and opportunities, all trail segments have been identified and ranked according to the mapping methodology described in Appendix I: Alignment Ranking Criteria. Though all segments have challenges and opportunities, the composite score reflects the sum of the positive number scoring of the "Opportunities" added to the negative numbers of the "Constraints." The overall composite score is shown on Figures 4-1 through 4-3. Each individual segment may have a large number of sub-segments with varying scores, but it is the averaging of these scores that give it the ranking shown in the figures.

Figure 4-1 provides an overview of all Type 1A (on the river floor) and Type 1B (on the first terrace or river bank) trails. This trail type is most suited for equestrian use, hikers, trail runners and mountain bikers. Figure 4-2 shows all Type 2A (near the river) and Type 2B (above the river bank on an upper terrace or near the rail line) paths. This trail type is intended to support almost all users on the hard surface trail or adjacent parallel soft surface trail. Figure 4-3 illustrates the location and ranking of all Type 3A (near a roadway) and Type 3B (on the roadway) facilities that are all hard surface and mostly for cyclists' use.

**Figure 4-1: Type 1A/1B Trails Composite Rankings**

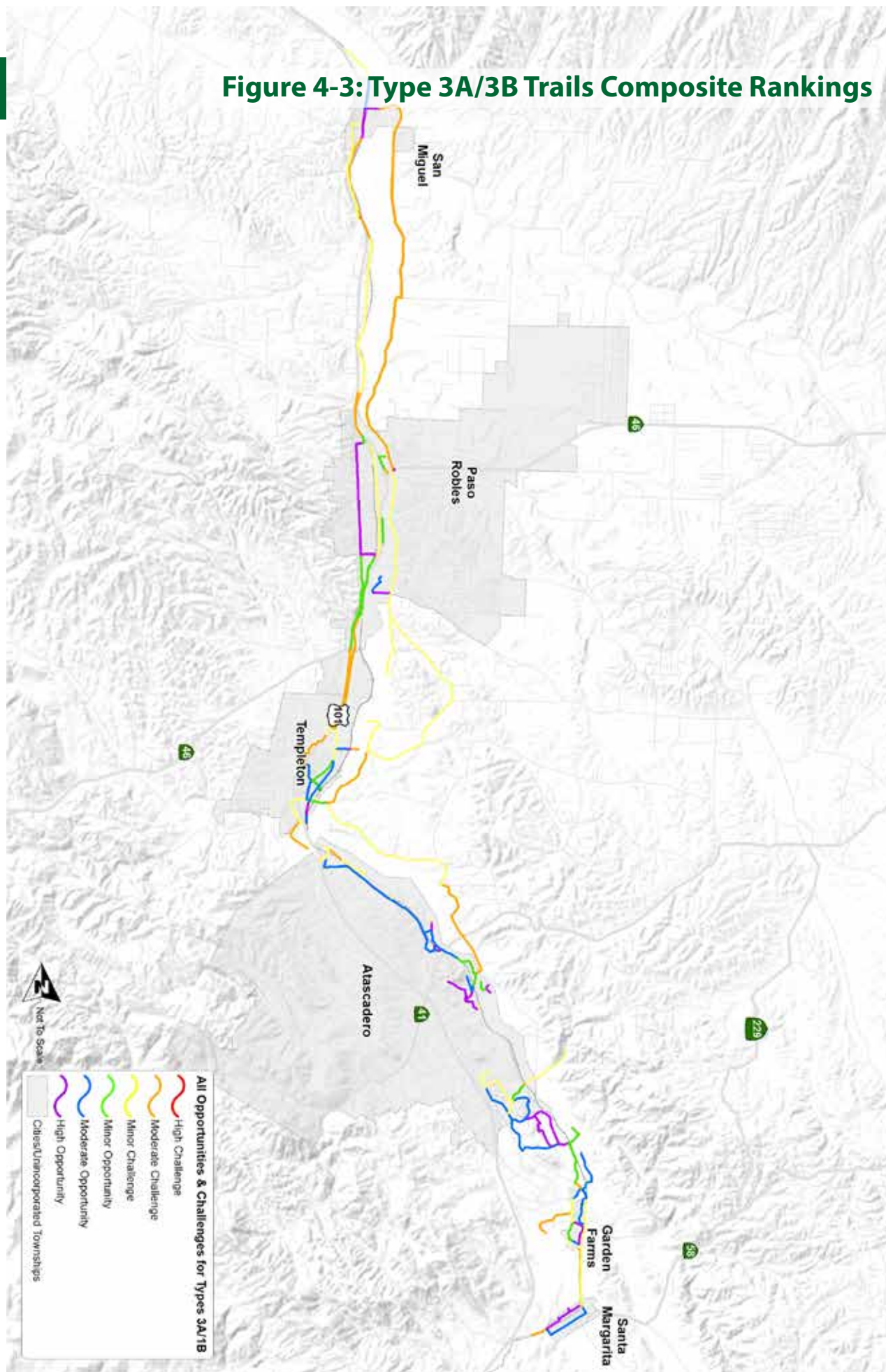


**Figure 4-2: Type 2A/2B Trails Composite Rankings**





**Figure 4-3: Type 3A/3B Trails Composite Rankings**





### 4.3 Selection of Primary Routes

Though it is not the intent of this study to recommend one route from one end of the study area to the other, this section describes the process and results of narrowing the range of alternative trail and path alignments that may best fit the overall program goals and desired user experience. In all cases, safety should be considered first, followed closely by the trail user experience, as well as the ability to connect with important transportation destinations and recreational amenities. Private properties, especially those developed with less than five acres, are shown as major challenges, and were therefore avoided when possible as part of the selection of primary direct routes.

#### Unimproved Natural Surface Trails (Type 1A)

These are unpaved trails, also termed “soft” surface trails, as illustrated in Figure 4-1. This trail type falls within the active river channel and would be unimproved, except for trailhead signage and route markings. Parts of the recommended unpaved alignment follow existing routes, primarily within the riverbed, but some sections are on other public agency land. It is expected that these alignments will continue to change over time with seasonal inundation and resulting river movement. The existing segments vary from informal narrow tracks to formally designed and constructed paved paths or dirt roads. Since most of the existing trails trend toward the former narrow condition, they will likely need upgrades and minor localized re-routes to meet SRT standards.

The primary direct routes for Type 1 soft surface equestrian/hiking/mountain biking trails pose less flooding and private property concerns since they do not represent a substantial public investment and they do not require a well maintained and obstruction-free condition. They will be able to sustain floodwaters. Even if completely removed by a flood, the connections of these trails with the spine of the trail (Type 2) will allow them to be easily re-established by users who will exit the hard surface trails where remaining markers indicate the beginning of these soft surface trails in the river channel. These trail types are not as much of a concern regarding private property since they clearly fit into the public use doctrine affecting major waterways and are located in areas where property owners generally do not attempt to fence or control. The proposed Type 1 trails (including the primary direct routes) are shown on Figure 4-4. They are also shown in more detail on the six reach maps (Figures 4-7 through 4-12).

#### Improved Firm Surface Trails (Types 2A and 2B)

A firm surface trail is defined as one topped with crushed rock or decomposed granite (DG) to provide a firm, stable all-weather surface that can accommodate pedestrians, most bicycles, wheelchairs, strollers and power-driven mobility devices, as illustrated in Figure 4-5. In some cases, this

may be supplemented with polymer reinforcement. A hard surface trail is one that utilizes asphalt or concrete materials. Hard and firm surface trail types are intended to be used in a combination, depending on local conditions. In general, the more urban the trail segment, the more likely it needs to be a hard surface trail. Both types are possible, but hard surface trails are preferred when the segment is expected to handle a fair amount of biking for transportation purposes. Also, concrete should be used when located in an area that is likely to be inundated with either slow moving water topping over the river bank, or more erosive flood waters.

Existing trails proposed to be employed as part of the SRT route may require minor improvements such as surfacing, drainage improvements, minor re-routes and short board-walk drainage structures or bridges over wet areas. These improved trail areas are not specifically identified on the maps and the improvement details are left to future stages of planning, engineering and design, but a placeholder budget is provided in the cost estimates corresponding to the extent of the improved trails in each reach.

The primary direct routes associated with hard surface trails are more difficult to select since there are so many constraints and challenges associated with each segment. Although there are likely to be some major issues with each segment, these issues are likely solvable, especially if there are very few options available without even greater challenges. The alternative and primary direct routes for Type 2 facilities are shown on Figure 4-5, as well as on the six reach maps (Figures 4-7 through 4-12).

#### Paved Paths (Type 3A)

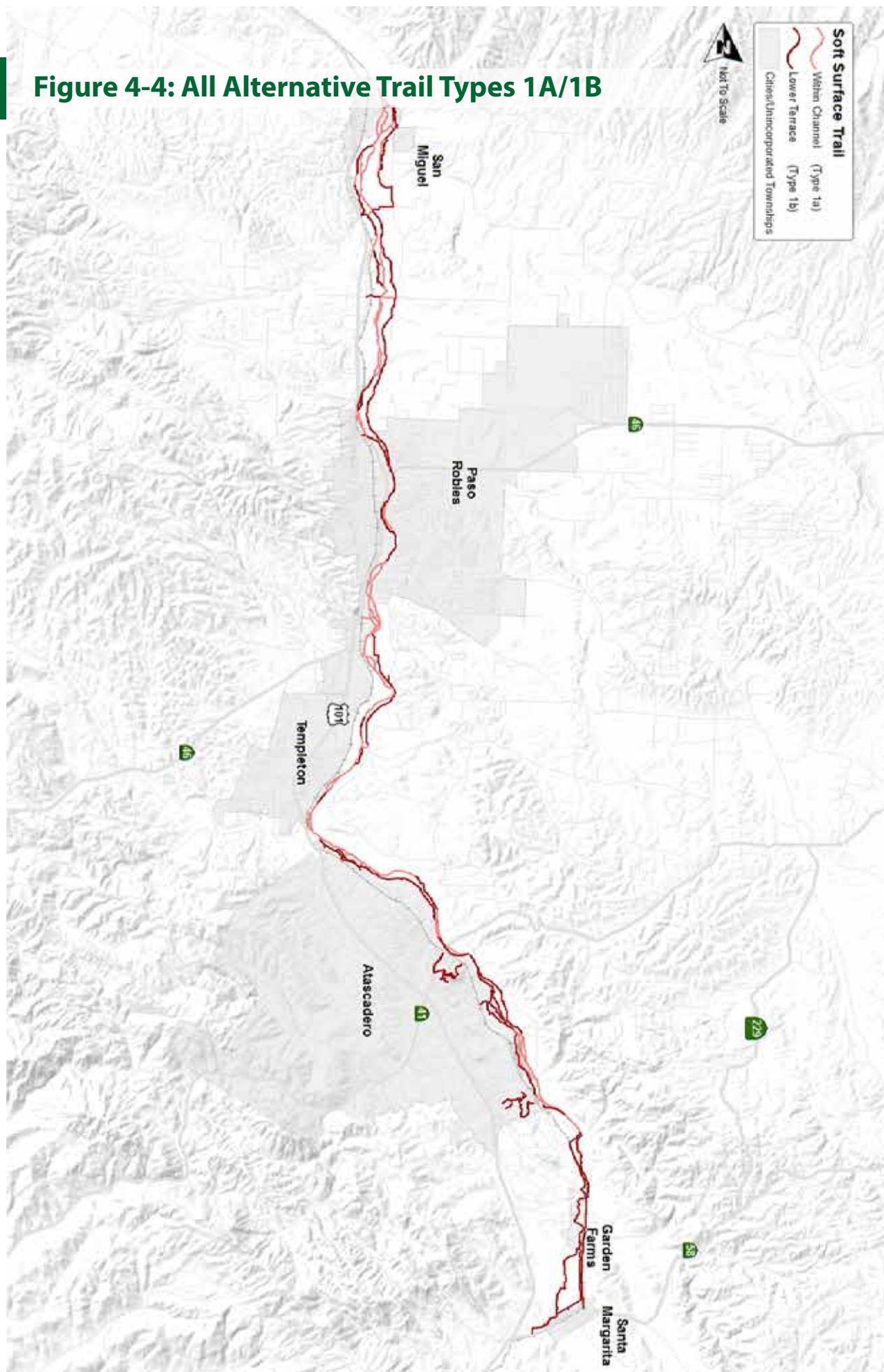
Paved paths (also commonly referred to as Class I bicycle paths or multi-use paths), are eight feet wide minimum with asphalt paving and two foot unpaved buffers, as illustrated in Figure 4-6. A continuous pathway Class I is the primary SRT route type goal. Such facilities exist on portions of the SRT route in Paso Robles. They often have striping and marking for the control of bicycle, pedestrian and other non-motorized users, as detailed in Chapter 3: Design Standards and Guidelines.

#### On-Street Routes (Type 3B)

An on-street route is a signed route for cyclists, ideally on low speed, low traffic volume streets. Where there are no adjacent sidewalks or pathways, pedestrians are allowed to use this on-street route within the roadway. The route may be designated as a Class II striped lane or a Class III signed bicycle route as defined in the Caltrans Highway Design Manual and summarized in Chapter 3: Design Standards and Guidelines. On-street routing is considered least desirable and will be implemented only where adjacent routing is not possible. There are some sections of on-street routes in the recommended alignment in Reach 6.

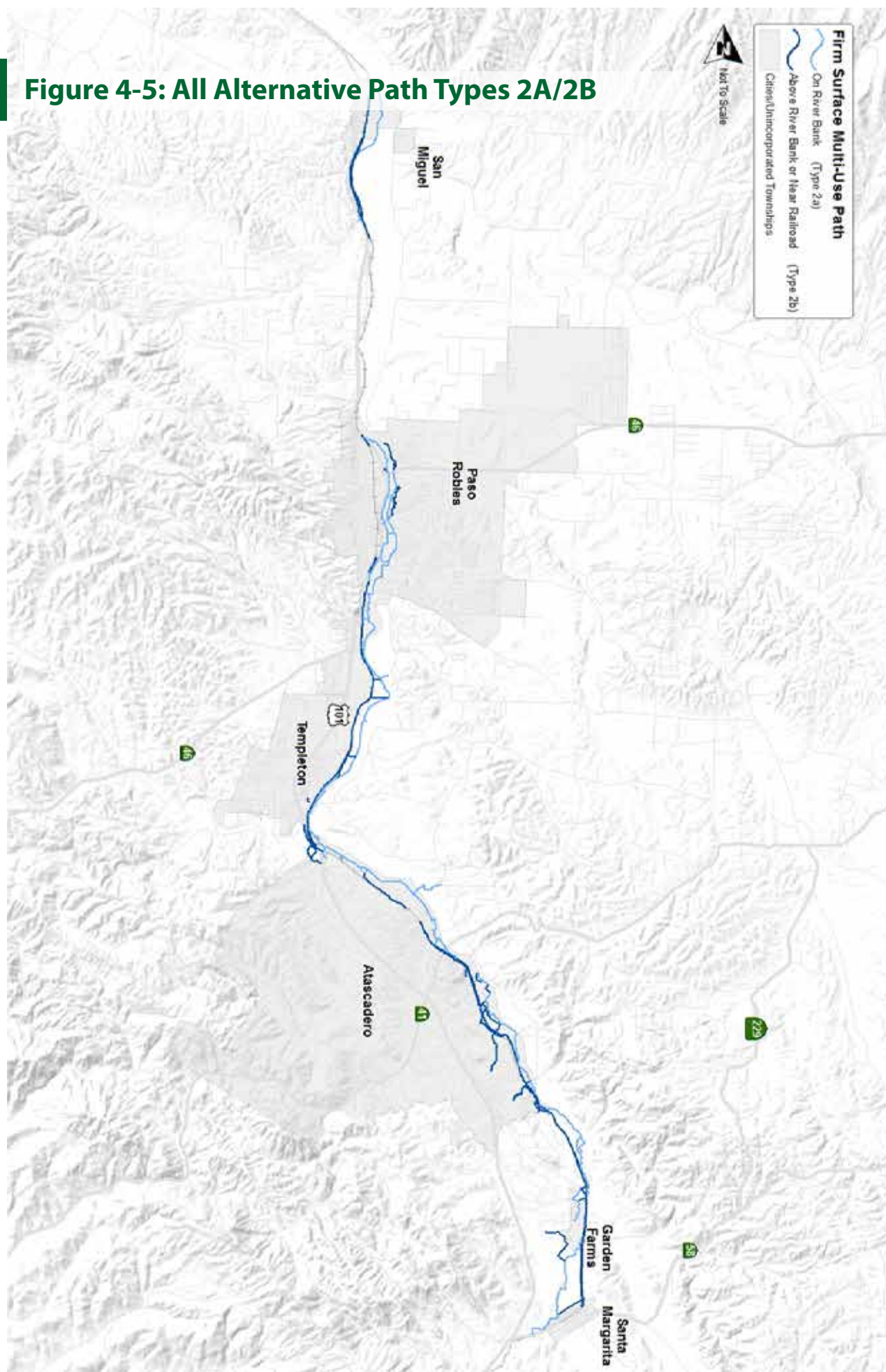


**Figure 4-4: All Alternative Trail Types 1A/1B**

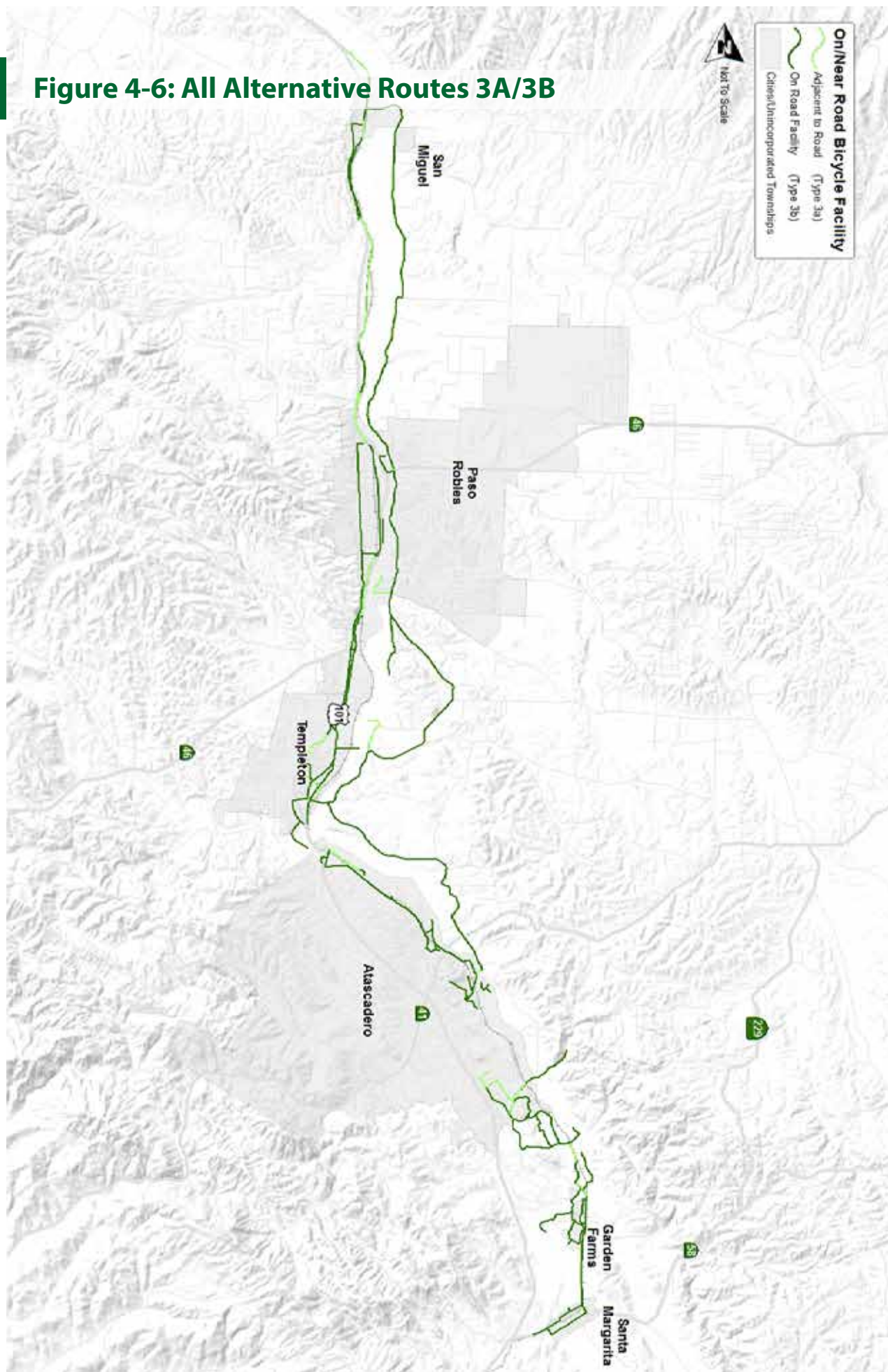




**Figure 4-5: All Alternative Path Types 2A/2B**



**Figure 4-6: All Alternative Routes 3A/3B**





No Type 3 routes that could potentially run the length of the corridor have been identified for the Type 3 on/near road routes because they are not the focus of the study and are intended to provide alternative routings in areas where the ultimate Type 2 facility will eventually exist. Several segments of the primary direct route, however, are Type 3 facilities. Many of these became necessary in order to avoid private property issues near the river. An overview of the Type 3 routes is shown on Figure 4-6, as well as on the six reach maps (Figure 4-7 through 4-12).

### Looped Trails

The six reach maps also indicate “Loop Trails” that touch on some portion of the primary direct routes. These loop trails are mostly soft or firm surfaces in the case of Atascadero, and are often hard surfaced in the case of Paso Robles. Loops are very important to the user experience. Many of these proposed loop trails will fit the needs of the local community and at the same time, will extend the primary direct routes along the corridor. Loops also typically take the trail user to different environments, especially on higher grounds that have great views of the river valley.

### Possible Trailheads

The six reach maps also include the locations of existing and proposed trailheads that would need to be associated with the primary direct routes.

## 4.4 Reach-by-Reach Descriptions

The following descriptions provide an overview of the six reaches that cover the proposed 35 mile SRT system from Santa Margarita to San Miguel. The trail corridor study area was identified through a combination of Steering Committee input, local knowledge and mapping analysis. The objective was often to keep the trail alignment as close to the river as possible to assure the best possible river edge experience. When involving private property, the trail has been placed in locations that are not developable or easily usable by the property owner and where the “river bank” location can rely on the public waterway public trust doctrine that assures public access to river resources.

### Reach 1 – Santa Margarita to Garden Farms (Figure 4-7)

Approximately eight miles long, Reach 1 of the SRT is anchored by the communities of Santa Margarita and Garden Farms. It is bounded on the west by Highway 101, El Camino Real on the east and falls within the historical Juan de Bautista de Anza trail corridor. However, access to the Salinas River corridor is approximately 1.5 miles east of any proposed trail alignment. There are no existing formal or informal trails within the communities of Santa Margarita and Garden Farms, but there are existing recreational trails near Halcon Road that are part of the Las Lomas subdivision in the City of Atascadero.

The southern segments will be able to take advantage of the Santa Margarita Ranch and various public rights-of-way and will not directly impact any private property. The northern segments of this reach have been adjusted to miss other private properties along the Salinas River. The hard surface trails have been shifted to existing soft surface trails in the Las Lomas development eventually connecting to Halcon Road.

### Reach 2 – Atascadero (Figure 4-8)

*(Halcon Road to the Lakes of Atascadero)*

Approximately seven miles long, Reach 2 of the SRT is located in the heart of the City of Atascadero. This portion of the proposed trail alignment diverges from El Camino Real along Halcon Road and runs parallel along the Salinas River. It is bounded on the west by the Union Pacific Railroad and Rocky Canyon Road on the east. This portion of the proposed trail alignment falls within the historical Juan de Bautista de Anza trail corridor and benefits from an existing system of formal and informal trails within Atascadero. The City of Atascadero Wastewater Treatment Plant (WWTP) property is home to the Juan de Bautista de Anza “South” Trail segment, while approximately two miles of Juan de Bautista de Anza “AMWC” and Juan de Bautista de Anza “North” Trail segments are located on property along the Salinas River owned by the AMWC. In addition, the Jim Green Trail is located in this reach, which could serve as a potential local trail loop to the SRT. This reach will require cooperation from Union Pacific and the Atascadero State Hospital be realized.

### Reach 3 – Atascadero to Templeton (Figure 4-9)

*(The Lakes of Atascadero to Main Street in Templeton)*

Approximately seven and a half miles long, Reach 3 of the SRT includes the northern portion of the City of Atascadero east of Highway 101 and the community of Templeton. This reach is bounded on the west by the Union Pacific Railroad and by the Salinas River on the east. This portion of the proposed trail alignment falls within the historical Juan de Bautista de Anza trail corridor and benefits from existing formal and informal trails within the City of Atascadero. Approximately two miles of Juan de Bautista de Anza “North” and Juan de Bautista de Anza “De Anza Estates” Trail segments are located on property along the Salinas River owned by AMWC and a designated open-space property owned by Grave Creek Estates, as well as the City of Atascadero “Rail Trail,” which runs parallel with the Union Pacific Railroad and Ferrocarril Road. A critical trail connection between the Atascadero and Templeton is located in this reach at Paso Robles Creek.



## **Reach 4 – Templeton to Paso Robles** *(Figure 4-10)*

*(Main Street in Templeton to 13th Street in Paso Robles)*

Approximately four miles long, Reach 4 of the SRT is the connection point between Templeton and the southern limits of the City of Paso Robles. It is bounded on the west by Highway 101, Neal Spring Road on the east and falls within the historical Juan de Bautista de Anza Trail corridor. The City of Paso Robles owns a majority of the properties along the Salinas River including the “Salinas River Parkway Preserve,” a 153 acre property intended to provide recreational uses for the community. This portion of the proposed trail alignment benefits from an existing informal trail network along the Salinas River and 2.5 miles of formal trails within the City of Paso Robles, including the Charolais Corridor, the Salinas Parkway, River Road and South River Road Trails.

## **Reach 5 – Paso Robles to San Miguel** *(Figure 4-11)*

*(Paso Robles to Wellsona Road)*

Approximately five and a half miles long, Reach 5 of the SRT follows the Salinas River north of the City of Paso Robles to the community of San Miguel. It is bounded on the west by Highway 101, North River Road on the east and falls outside of the historical Juan de Bautista de Anza trail corridor, which heads northwest towards Lake Nacimiento. There are no existing formal or informal trails within this reach. This reach has numerous challenges in that the majority of the properties along the Salinas River are under private ownership and that North River Road is extremely narrow with little to no shoulders. An alternative alignment along North River Road avoids conflicts with private property while improving pedestrian safety and allowing potential trail users to experience the Salinas River corridor.

## **Reach 6 – San Miguel** *(Figure 4-12)*

*(Wellsona Road to San Miguel)*

Approximately four and one quarter miles long, Reach 6 of the SRT is the final destination of the proposed trail system and is anchored by the community of San Miguel. It is bounded on the west by Highway 101, North River Road on the east and falls outside of the historical Juan de Bautista de Anza trail corridor. There are no existing formal or informal trails within this reach. This reach has numerous challenges in that the majority of the properties along the Salinas River are under private ownership and North River Road is extremely narrow with little to no shoulders. An alternative alignment along North River Road avoids conflicts with private property while improving pedestrian safety and allowing potential trail users to experience the Salinas River Corridor.

## **4.5 Trail and Support Facility Types**

This section describes and defines the specific trail types and related improvements shown on the map legend and discussed in the reach-by-reach recommendation descriptions in Section 4.4. The types and locations of most of these features are shown on the legend and maps. Others are described in the text and in illustrations in this section and in the site-specific descriptions in Section 4.3.

### **4.5.1 Trail and Path Types**

(In keeping with nomenclature standards employed throughout this master plan, paved routes are referred to as “paths” and unpaved routes are referred to as “trails.” See Figure 3-4: Trail Location, for more detailed descriptions.)

For long-distance and “serious” local cyclists, roadways are the most desirable routes, provided there is adequate paved width. The minimum is four feet outside the vehicle lanes and ideally eight-foot shoulders where feasible, according to the Highway Design Manual. Serious cyclists typically prefer roadways to mixed-use paths shared with other users, especially if the separated facility is more circuitous. However, it is likely that the majority of SRT cyclists will be recreational users for whom shared use and circuitousness are not concerns. In addition, the proposed routing is actually less circuitous than existing on-street routes. The paved routes adjacent to roadways such as River Road in Reach 6 are not likely to attract other user types.

### **4.5.2 Boardwalks**

Boardwalks are often used for trail reaches crossing wetland areas or other sensitive, unstable substrate. These facilities are discussed in more detail in Section 4.5.6, Bridges and Drainage Crossings, below. The use of boardwalks on the SRT should be limited to areas where other solutions are not feasible since boardwalks are expensive to construct and maintain, and are potentially obtrusive in a natural setting. These structures may be supported on log or timber “sleepers” resting directly on the ground, or may be supported on footings. In sensitive settings, composite recycled timber sleepers have been preferred because they do not leech chemicals into the water or soil, yet are very resistant to deterioration. These structures typically have a low height, and do not include a railing, so the visual impact is minimized. However, a railing should be provided adjacent to deep water or steep drop offs.

### **4.5.3 Routes to Close**

Some existing trails, typically unpaved “volunteer” trails created by users, are recommended to be closed because they may impact sensitive resources, cause erosion or siltation, or present potentially hazardous situations or management problems. Closure could simply entail signage, potentially unobtrusive low barriers, such as temporary symbolic fencing,



and in some cases, active steps to restore a natural condition, such as breaking up the surface and seeding. The specifics are left to future more detailed planning and design, but a placeholder budget is provided in the cost estimates corresponding to the extent of the potential routes to be closed in each reach.

### 4.5.4 Trailheads, Staging and Parking Areas

A staging area is a parking area with associated space and facilities to prepare for a trail hike or ride. It is also a trailhead in the sense that it should provide a direct connection to the trail, information about using the trail, and potentially a controlled access. A trailhead is a designated public access point to the SRT, usually at a staging area with parking, but potentially at a point where users from nearby neighborhoods or visitor serving areas can enter. Trailheads usually feature some signage and map and/or written information about the trail and its use. Many trailheads have adjacent available on-street parking. Beyond the specific recommendations outlined in this chapter, city land managers will evaluate the feasibility and need for improving trailheads and/or parking areas when considering the implementation of this master plan's recommendations.

### 4.5.5 Signs

The SRT will require basic trail signs and markers, and in some locations such as staging areas and trailheads, trail user orientation signs and maps, as well as site identity and vehicular-oriented signs. For those segments that are found to be consistent with the National Park's Juan Bautista de Anza trail designations, special markers and historical interpretive panels area suggested. Appendix F includes guidelines for the types and locations of signage that would be provided for the SRT.

### 4.5.6 Fences, Gates and Stiles

Fencing is generally not required along most reaches. SRT improvements and costs only include fencing and gates at staging areas, as described in that subsection, as well as along areas of agricultural land use, especially equestrian uses. Gates, stiles and fencing are recommended to be simple wood, pipe, and/or wire consistent with the existing ranching and agricultural uses typical of the setting. Actual fence type (smooth or barbed wire, wood or T-post) would be determined as part of site-specific design. Due to a recent federal ruling regarding allowing access to powered vehicles that may be used by people with disabilities, a simple trail gate that can be opened and closed by visitors with gravity and/or spring loaded automatic closing may be the best solution.

### 4.5.7 Bridges and Drainage Crossings

There are several drainage crossings along the route, varying from minor and ephemeral to major creeks, as well as crossings of the Salinas River itself. These crossings are one of the most significant challenges and variables for the SRT master plan. Drainage crossings, or any other work that impacts them, may require permits from the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service (USFWS), and potentially the U.S. Army Corps of Engineers if wetlands or standing or running water is impacted. Approval by the Regional Water Quality Control Board (RWQCB) may also be required. These potential requirements are described in more detail in Chapter 5: Action Plan. There are two basic alternatives for crossing these drainages: 1) cross on a bridge, which could vary from a simple puncheon or boardwalk to a major highway bridge; or 2) cross on a culvert. Options, issues and approaches are discussed in detail below.

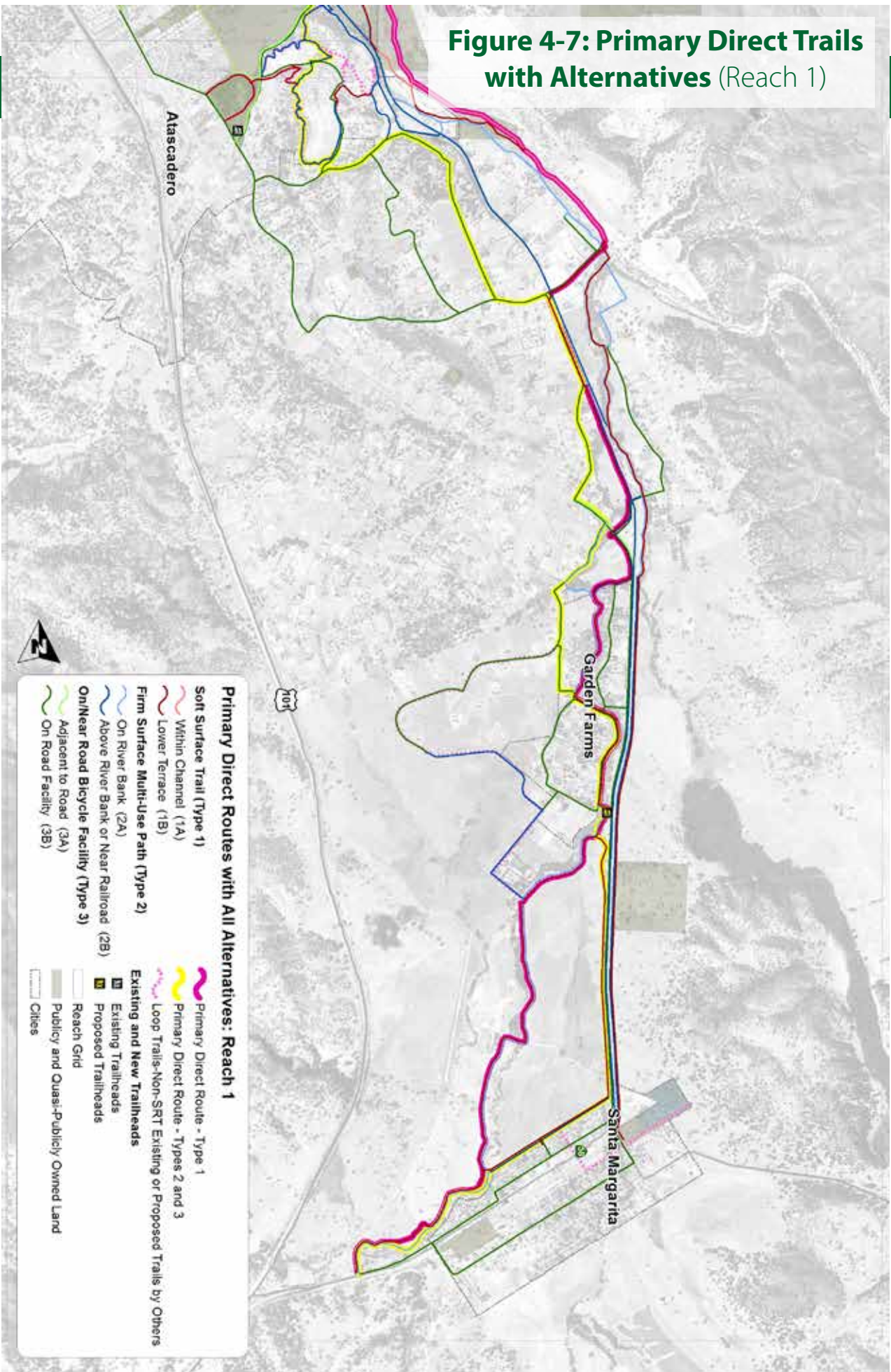
#### Fiberglass Trail Bridges

An alternative to a steel or wood bridge is a prefabricated site-assembled fiberglass bridge. These lightweight bridges have been used successfully in SLO-area State Parks and other similar settings. They can be placed and assembled on-site without the need for heavy equipment and will have much less initial impact than a prefabricated steel bridge or a site-built steel or concrete bridge. They can be installed on timber or concrete crib foundations, or directly on bank top, depending on design load. A limitation is their limited maximum span of approximately 50 feet, and while they can support horses and ATV-type trail maintenance vehicles, they cannot support full size patrol, maintenance, or emergency response motor vehicles, should that be a requirement. It is assumed that this is not a requirement for the SRT due to the close proximity of roadways along the entire route, often within half a mile.

#### Wood Trail Bridges

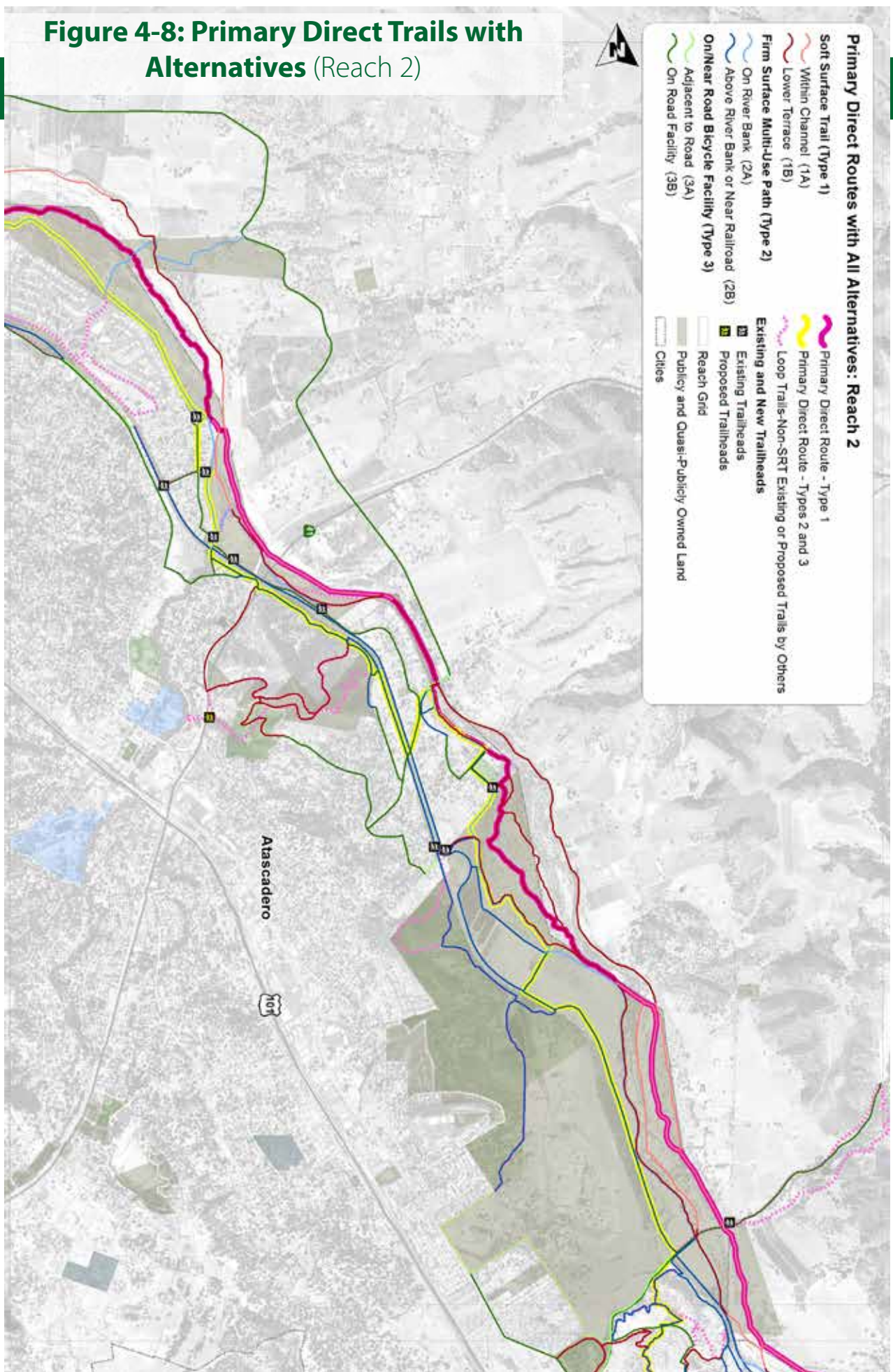
Short span solutions are often used due to their relatively low cost and rustic appearance. Short wood trail bridges may be the best alternative where the span is as short as eight to twenty feet. At less than eight feet, the structure is assumed to be a boardwalk. Long span wood bridge construction requires nearly the same level of site access and foundation support as a steel bridge, and wood's life span is limited.

**Figure 4-7: Primary Direct Trails with Alternatives (Reach 1)**



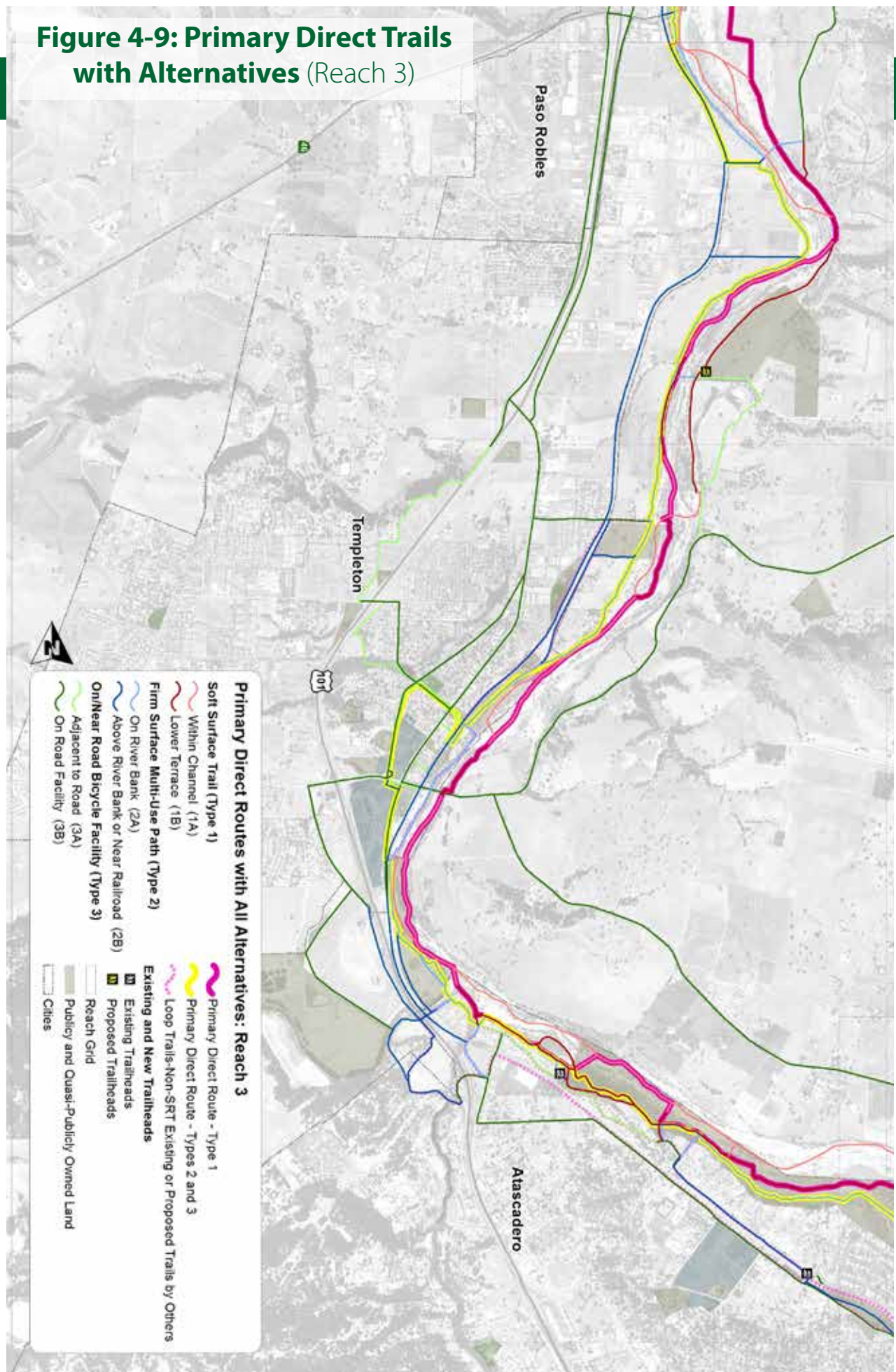


**Figure 4-8: Primary Direct Trails with Alternatives (Reach 2)**

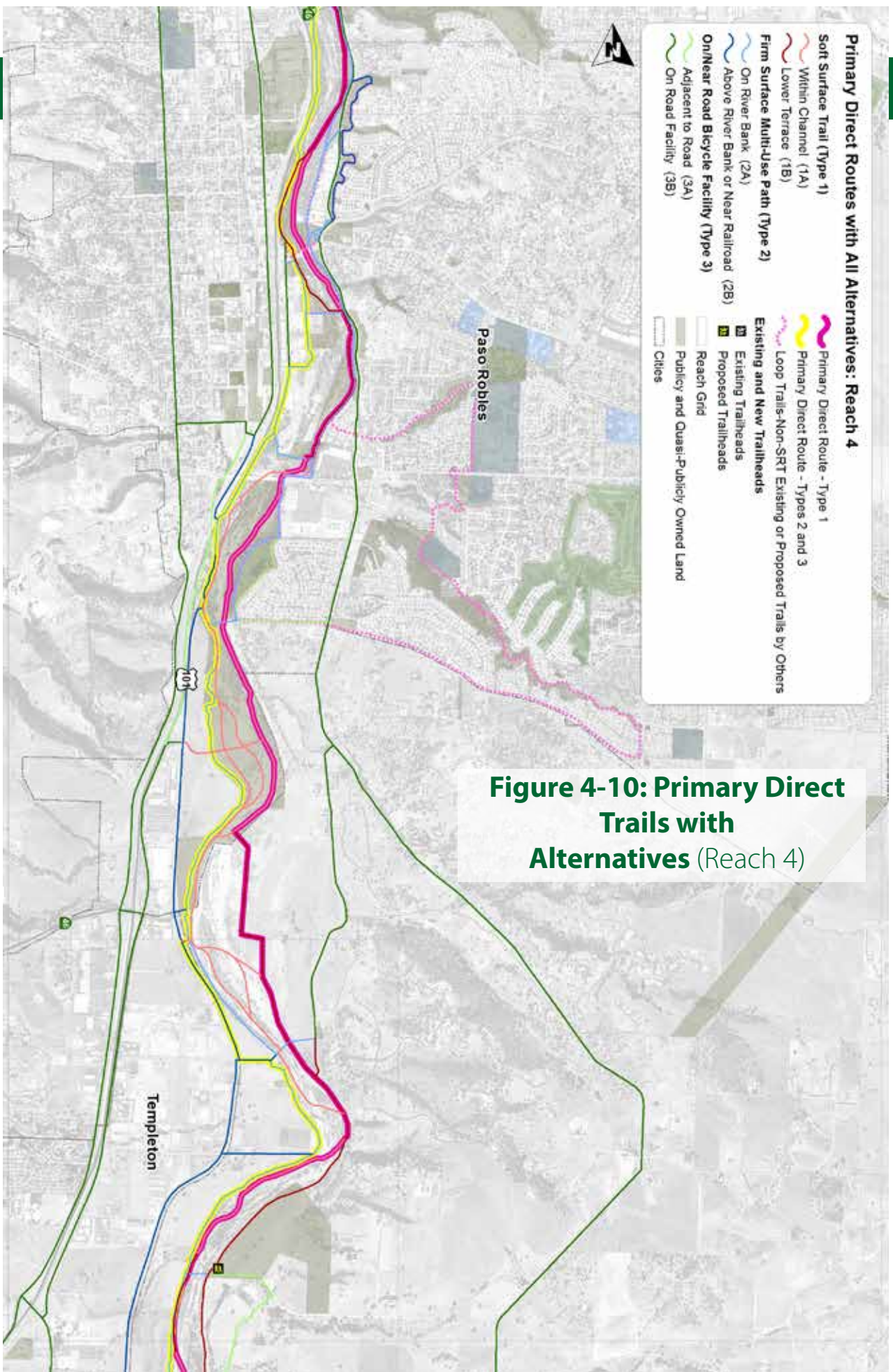




**Figure 4-9: Primary Direct Trails with Alternatives (Reach 3)**



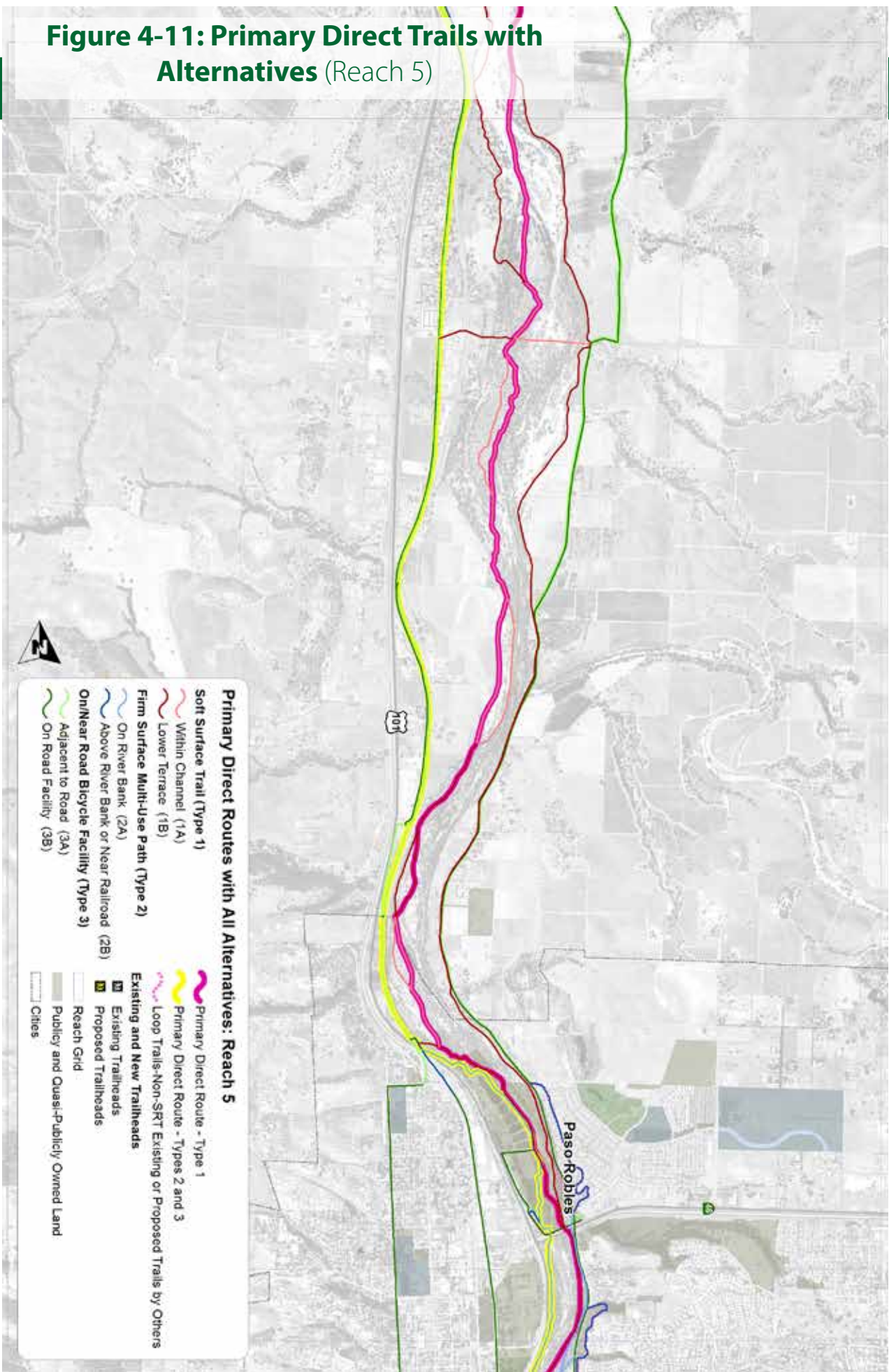




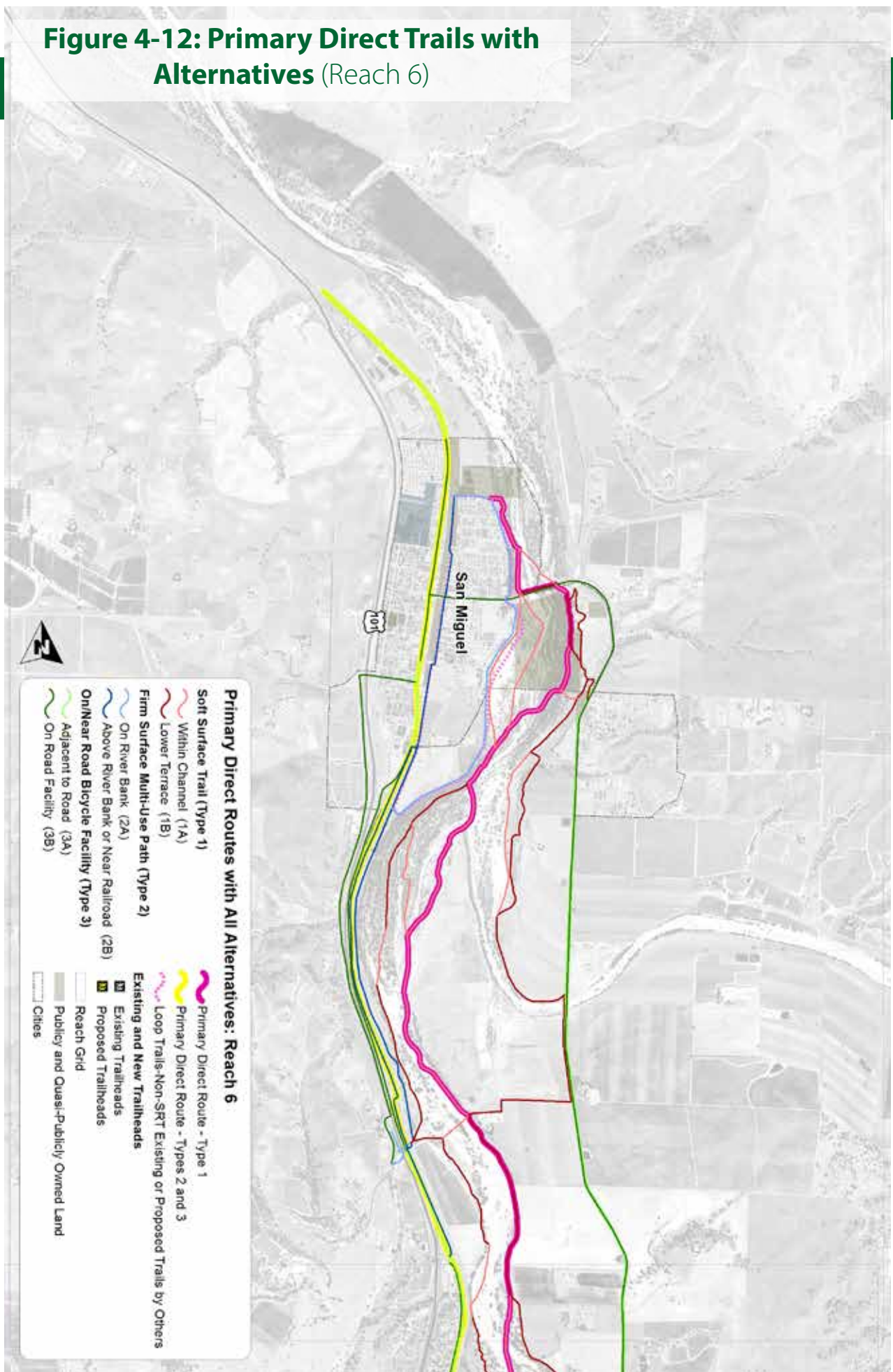
**Figure 4-10: Primary Direct Trails with Alternatives (Reach 4)**



**Figure 4-11: Primary Direct Trails with Alternatives (Reach 5)**



**Figure 4-12: Primary Direct Trails with Alternatives (Reach 6)**





## Boardwalks and Puncheons

These are described under trail types because they are defined by location on the recommendations maps. There may be little structural or cost difference between a boardwalk and a wood trail bridge. A puncheon is a very low boardwalk that does not require railings, and will typically be less expensive than a bridge or boardwalk.

## Culverts

A culvert is a metal or concrete pipe or more elaborate concrete box placed in the drainage channel and covered with earth fill. However, culverts are not likely to be used where their impact on natural creeks and habitats is considered to be an issue. In those cases, trail bridges or boardwalks may be better alternatives to cross drainages, depending on size and conditions.

## Alternatives for Major Drainage Crossings

There are several locations along the route that would need long bridges crossing the riverbed. In other cases, there are intersecting creeks entering the main channel. Both situations present significant challenges for the SRT. Close review should be accomplished early to test if an alternative route around the crossing is possible. In the case of shorter bridges, the expense and improvement in user experience and directness of the route is usually worth the expense of the bridge.

## Existing Highway Bridges

Highway bridges with eight foot shoulders can physically accommodate bicycles and pedestrians. However, it is not appropriate to designate these shoulders as a trail route with two-way pedestrian traffic, and in some cases potentially wheelchairs and horses, sharing with cyclists. Barriers separating the shoulder from the travel lane are not acceptable to Caltrans if they affect the availability of the shoulder for safety purposes. Affected bridges are in good condition, and neither the County nor Caltrans has plans for their replacement.

## Long Span Trail Adjacent to Highway Bridges

An alternative to an added on cantilevered structure would be to construct a steel or concrete trail bridge parallel to the existing bridge, ideally at a lower elevation to reduce visibility and noise from the highway bridge. The challenge is that environmental and permitting agencies will not want bridge footings or abutments to be placed in the flood plain, or to impact riparian vegetation, cultural resources, or other resources that tend to be concentrated in and around these drainages. The additional visual impact is another significant concern.

Long span trail bridges or highway bridge retrofits would be a very costly. Where there is a relatively long span involved, good temporary construction access for bridge installation, and distance and/or riparian vegetation screening, a prefabricated steel bridge may be appropriate.

Prefabricated steel bridges can span 200 feet or more, depending on design and load capacity requirements. They typically feature concrete pier foundations and headwalls. Such bridges can be designed to carry patrol and maintenance vehicles.

A significant factor with steel bridges is rust. Regular surface inspection and maintenance is recommended. A COR-TEN finish is a potential long-term solution since COR-TEN steel alloys were developed to eliminate the need for painting by forming a stable rust-like appearance upon exposure to the weather.

## 4.5.8 Side-paths and Cycle Tracks

A two-way multi-use path in an adjacent roadway's right-of-way is often termed a "side-path" or "cycle track." Where warranted to protect sensitive resources, or where there is insufficient physical space or lack of public access, or to cross a drainage on an existing highway culvert, the SRT may be routed in the right-of-way adjacent to a roadway. The design and feasibility of a side-path depends on Caltrans design criteria. The main design issues will be setback from the road shoulder for safety, generally avoiding visual or environmental impacts, and provision of a safety barrier between the road and the path where warranted by proximity. As with any improvements in the State right-of-way, they would be subject to an encroachment permit from Caltrans, compliance with the Highway Design Manual, and potentially other environmental standards and ordinances. Based on the Highway Design Manual, the available space required for a SRT side-path could vary significantly, roadways other than highways have less stringent requirements.

## 4.5.9 Highway Crossings

There are a number of locations where the recommended alignment crosses a highway or major roadway. In other cases, connections to the other side of the roadways exist or are recommended to connect to important visitor destinations and facilities, and other trails. Improving these crossings may also allow cyclists to cross to these destinations more safely. There are two ways to create a formal highway crossing: an at-grade crossing, or an undercrossing at an existing highway bridge. At-grade highway crossings are not included in this master plan, but crossings of other roadways are included. Establishing a new crossing can be challenging, especially where there are existing high vehicle speeds and volumes and Caltrans' standards for warrants and safety concerns. Hybrid beacons or other actuated pedestrian crossing treatment may be appropriate. In any case, a formal study of the need, feasibility, and design of such a crossing would be a necessary step. To avoid these issue, crossing at an existing intersection is recommended.





### 4.5.10 At-grade Rail Crossings

The only at-grade crossings recommended in this master plan are at permitted public utilities commission (PUC) rail crossings. Establishing a new at-grade crossing is very difficult unless another at-grade crossing is eliminated. This plan recommends using only existing at-grade crossings. Questions remain whether the Union Pacific Railroad will allow public crossings at existing at-grade crossings where such a crossing is only to provide access to landlocked private property.

### 4.5.11 Bridge Undercrossings

Undercrossings exist or could potentially be created where highway bridges cross major drainages. Given their connections to other unpaved trails, these undercrossings are envisioned to be unpaved, but could be paved to provide more formal access. Depending on bridge configuration and the surrounding site, such undercrossings may be subject to seasonal flooding, an important issue for their feasibility and design.



# Salinas River Trail Master Plan



Action Plan

5





This chapter describes the typical implementation steps to take a conceptual trail project from a master plan through construction. These steps would need to be implemented by the agencies and entities that would likely be parties to the project. The major steps discussed include the basic operation and management requirements of the project, followed by a description of the permits and approvals that may be required for project implementation.

## 5.1 Project Implementation Steps

This master plan is a relatively high-level study of trail alternatives. Actual trail project implementation will require additional site-specific processes with many subsequent steps as outlined below. Minor projects involving mainly signing, or unpaved trail upgrades, or construction without grading or structures may have much simpler processes and shorter schedules. The steps for any particular project are likely to vary in terms of applicability, sequence and timing. The following steps are typically required for a major public trail project.

### 5.1.1 Alternative Route Selection

This document concentrates on providing a number of route type options and alternative segments. The primary reason for this large number of options is that trail systems can be difficult to implement since it is highly likely that some portion of a proposed trail can become infeasible or difficult to implement. Common examples are the inability to find access through private property or when a major environmental constraint is encountered.

This study fully expects that the County of San Luis Obispo, as well as the cities of Atascadero and Paso Robles, will embark on segments of this system in the near future, both in a collaborative manner and also somewhat independently. The most important coordinating aspect of independent efforts will be to agree between the cities and the county at which point on their boundaries will they meet. Figures 5-1 and 5-2 show the critical points of connection and coordination. Since each agency could potentially determine that a specific route alternative is superior to another, if the adjacent agency does not agree to this connectivity point, the trails may not match up. A continuous organization steering committee, Joint Use Powers Authority, or some other entity that assures a level of communication and coordination is needed. SLOCOG can still provide a coordinating effort for this trail system, but the majority of the effort will be placed on the County or Atascadero and Paso Robles.

### 5.1.2 Funding - Grant Applications

Funding will be needed for detailed design, surveying, property or easement acquisition (if required), environmental documents, preparation of construction and permit documents, as well as for actual construction. Funding is often phased, covering only a part of the implementation process. A basic map, description, photos and cost estimate for the proposed project must be prepared, at a minimum, to support a grant application and to compete for public or private funding.

This master plan's trail concepts and supporting documentation were purposefully intended to provide good starting material for preparing grant applications and project funding proposals. Funding for the trail could come from any level of government, as well as from non-governmental organizations. Appendix H presents potential funding sources, describes the eligible trail types for various funding programs, and summarizes grant criteria and application requirements.

### 5.1.3 Project Agreements - Right-of-Way Acquisition/Permission

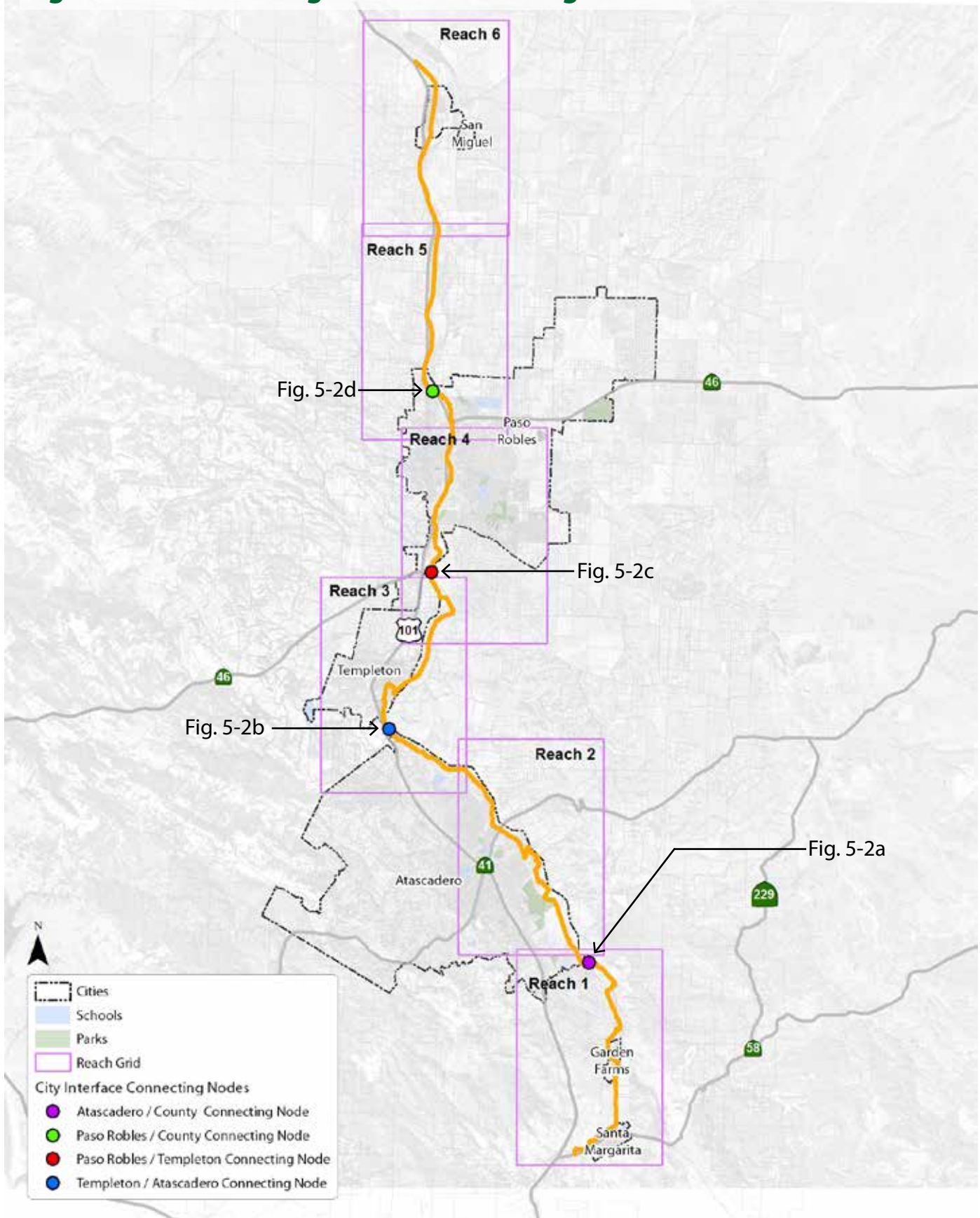
If acquisition or permission for use of property for the trail is required, this will need to be secured, at least tentatively, before significant study or design work can begin, and typically must be finalized before preliminary design (when the feasible/desired alignment is defined) or at least before preparation of construction documents.

Property access and easement or right-of-way issues are perhaps the largest challenge for implementation. The Union Pacific Railroad will need to be contacted for their approval of at- and below-grade crossings, as well as closely parallel to or within their track right-of-way. The Atascadero State Hospital grounds occupy a key location and will need to be contacted for further negotiations and concept meetings. Caltrans' rights-of-way are also affected and agreements and permits will be required in these locations. And even though some of the cities, special districts, water and wastewater districts are governmental or quasi-government entities, agreements for the use of their lands may be complex and time-consuming.

However, none of these issues will be as challenging as the difficulties and expense related to the use of private properties. There are many statutes, regulations, policies and doctrines (See Section 5.5) that protect property owners. There are also considerable tax and public relation benefits to dedicate easements and open space. Figures 5-3 through 5-8 are maps showing where some of the property use issues occur and where coordination efforts will be needed. Also, refer to Appendix C for maps showing the changes made between the public draft and the final based on property owner concerns.

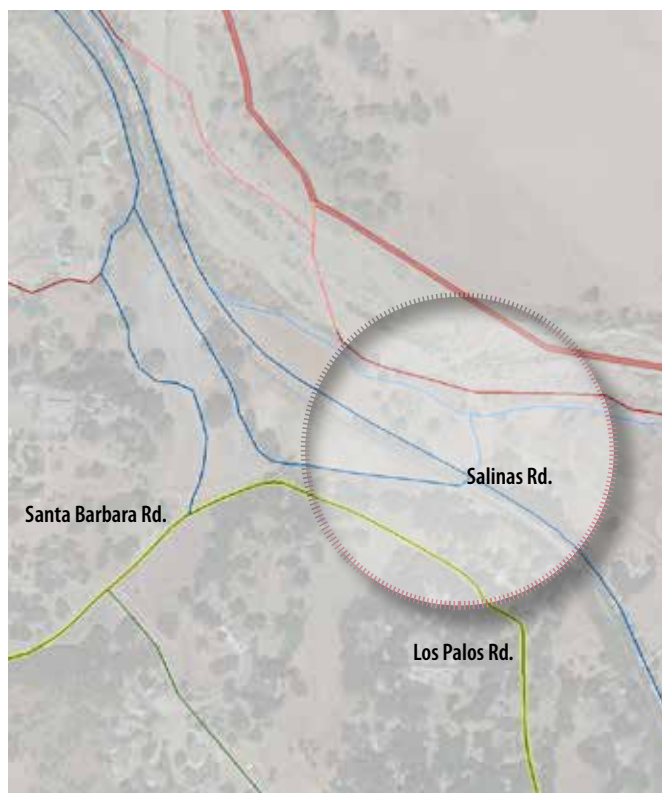


**Figure 5-1: Connecting Nodes Between Agencies**

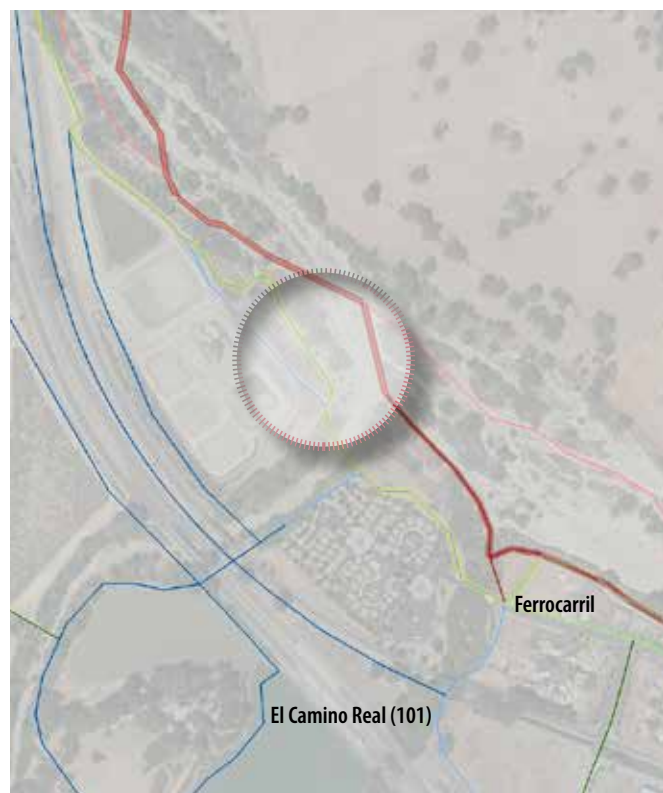




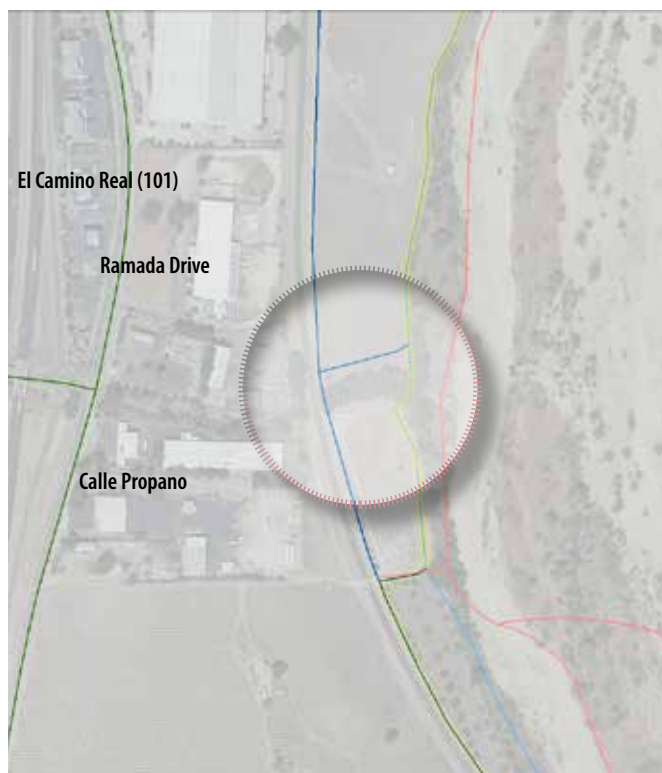
## Figure 5-2: Connecting Nodes Detailed Views



5-2a: Atascadero to County Connecting Node (Reach 2)



5-2b: Atascadero to Templeton Node (Reach 3)



5-2c: Templeton to Paso Connecting Node (Reach 4)



5-2d: Paso Robles to County Connecting Node (Reach 5)





## 5.1.4 Site Survey - Base Maps and Information

For more formal, urban area projects, detailed CAD or GIS base maps with right-of-way/property lines, topography (contour lines and/or spot elevations) and features such as roadways, major vegetation, buildings and fences must be prepared by a land surveyor or civil engineer covering the trail route and adjacent areas. In a rural or remote setting, especially for less formal unpaved trails, a detailed GIS-based topographic and aerial photo map may be sufficient for laying out and designing the trail. In any case, pertinent codes, policies, adjacent plans, utilities and other background information must be researched and analyzed for their relevance to the project.

## 5.1.5 Preliminary Design

More detailed plans would be developed, typically by a team including a landscape architect, a trail planner and a civil engineer. These plans would have relatively accurate locations, dimensions, materials and features to allow a correspondingly detailed preliminary cost estimate, but they would not have all the information required for bidding and constructing the project. The preliminary plans would be the basis for environmental documents and public and agency project review.

## 5.1.6 Technical Studies

The master plan's analysis of conditions, resources and requirements is intended to help configure the trail improvement concepts to avoid "fatal flaws," but the feasibility of some solutions can only be determined through detailed site-specific studies. They often include biological and cultural resources, hydrology, traffic, soil borings and geotechnical analyses for bridge foundation design, or for other factors critical to design and/or project approval. These may be completed before, during or after preliminary design, depending on study purpose and type, the trail or path type, and ownership.

## 5.1.7 Environmental Studies and Documentation

State and federal law and nearly all grant programs require environmental studies and findings by a responsible public agency to comply with the *California Environmental Quality Act* (CEQA). If federal funds or interests are involved, the document may also need to address the *National Environmental Policy Act* (NEPA), which has slightly different process and document requirements. The environmental document must review and address a broad range of potential issues, and often the most complex issues are special status (rare, threatened, or endangered) plant and animal species protected under law.

## 5.1.8 Permits

Project sponsors may need to obtain several types of permits and agreements, which are described in detail in Sections 5.3 and 5.4. Preparing applications and completing the permitting process in areas with sensitive resources and many legal conditions and constraints can be time-consuming and costly.

## 5.1.9 Construction Documents

The preliminary plan drawings and descriptions will need to be translated into detailed construction plans, specifications and estimate that can be used to obtain permits that require such detail, and for bidding by contractors.

## 5.1.10 Bidding and Contracting

Contract bid documents for the project must be prepared and the project must be advertised for public bid. The bids must be analyzed and the sponsoring agency must award a construction contract to the lowest responsible bidder.

## 5.1.11 Construction

In addition to the work of the contractor, construction of a public project entails responsible agency and/or consultant staff to oversee the contractor and administer the project, including any grant-imposed procedures or paperwork.

# 5.2 SRT Reach Improvements and Implementation Steps

The reach improvements do not necessarily identify drainage crossing type for each location because determining the most likely type will require further analysis prior to design and implementation. Drainage crossing alternatives are listed in some cases, such as a culvert or bridge, as well as at major drainage crossings and roadway bridges, since these locations could include a separate trail bridge or a roadway bridge retrofit. Bridge types and lengths are not defined in the list, but are preliminarily defined by type (short, medium, long trail bridge, etc.) where feasible in Chapter 4: Master Plan Recommendations and in the cost estimates in Appendix G.

# 5.3 Permitting and Approvals

Typically, each SRT segment pursued as a project may involve obtaining several permits and agreements. This section summarizes the types of permits and the basic process for each. Chapter 3 - Design Standards and Guidelines, discusses the standards and criteria of the pertinent regulatory documents.

## 5.3.1 San Luis Obispo County Permits

Virtually all improvements require permitting. Signs and other rudimentary improvements can be approved administratively, but the projects contained in the master plan will require full permit and potentially a hearing. Permits may be consolidated with other permits, such as the land use permit. SLO County will handle the majority of permit applications. Potential permits are listed below, and will depend on project design specifics, such as whether land or right-of-way acquisition is required for SRT development.

*Conditional Use Permit (Development Plan) - A discretionary permit, acted on by the Planning Commission, allowing a specific land use.*

*Construction Permit (Building or Grading Permit) - A permit required to construct, erect, enlarge, alter, repair, move, improve, convert, or demolish any building or structure, unless exempted by the County Building and Construction Ordinance (Title 19) or the Uniform Building Code (UBC).*

*Lot Line Adjustment - A discretionary application that alters the property lines between four or fewer existing adjoining parcels, taking land from one parcel and adding it to an adjacent parcel without increasing the number of parcels.*

*Road Abandonment - A formal request to abandon the right-of-way adjacent to a lot, thus incorporating that right-of-way into that lot.*

*Site Plan - A ministerial permit allowing a specific land use.*

State and federal agencies are technically exempt from local codes, including grading and building permits, although they have their own internal standards, review and approval procedures.

### 5.3.2 Encroachment Permits

Where a project involves work or permanent improvements within the State or County roadway right-of-way, an encroachment permit from Caltrans or the County will be required. This typically requires a maintenance agreement with either a public agency or a non-profit organization to ensure that the SRT facilities in the roadway right-of-way will be adequately maintained.

## 5.4 Environmental Documentation

### 5.4.1 National Environmental Policy Act

Passed in 1969, the *National Environmental Policy Act* (NEPA) purpose is to assure that all branches of government give due consideration prior to undertaking any major federal action that could significantly affect the environment. NEPA establishes the requirement that all federal agencies' funding or permitting decisions be made with full consideration of the impact to the natural and human environment. It also requires agencies to disclose these impacts to interested parties and the general public. The central element in the environmental review process is a rigorous evaluation of alternatives, including the "no action" alternative.

### 5.4.2 California Environmental Quality Act (CEQA)

The *California Environmental Quality Act* (CEQA) was created in 1970 to supplement NEPA through state law. CEQA requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

CEQA applies to certain development activities, including those of State and local public agencies. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a "project." A project is an activity undertaken by a public agency or a private activity that must receive some discretionary approval that may cause either a direct physical change or a reasonably foreseeable indirect effect on the environment.

Most proposals for physical development in California are subject to the provisions of CEQA, as are many governmental decisions that do not immediately result in physical development (such as adoption of a general or community plan). The environmental review required imposes both procedural and substantive requirements. At a minimum, an initial review of the project and its environmental effects must be conducted, called an Initial Study. Depending on the potential effects, a further and more substantial review may be conducted in the form of a Mitigated Negative Declaration (MND) or an Environmental Impact Report (EIR). A project may not be approved as submitted if feasible alternatives or mitigation measures are necessary to substantially reduce its significant environmental effects.

### 5.4.3 Section 404 Permit - U.S. Army Corps of Engineers (USACE)

A Section 404 Permit application to the USACE for placement of fill, including consultation with the U.S. Fish and Wildlife Service, may be required to satisfy the requirements of Section 404(b)(1) of the *Clean Water Act* (CWA).

A Jurisdictional Delineation Report, or wetland delineation, is part of the technical studies required in any location where there is wetlands potential. It maps and obtains USACE concurrence on jurisdictional "Waters of the U.S.," including wetlands (if present), and/or "Waters of the State."

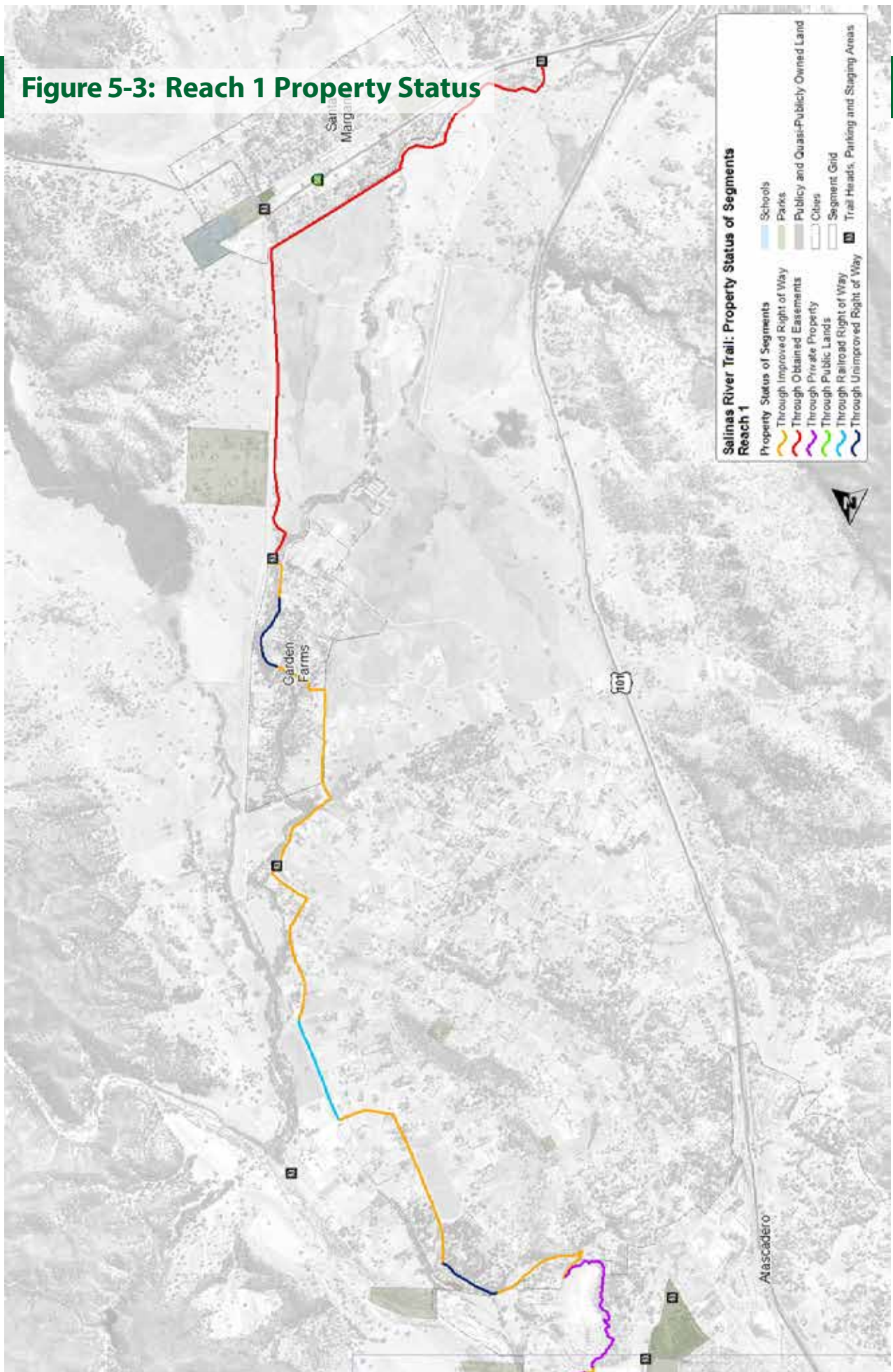
### 5.4.4 Section 401 Water Quality Certification - Regional Water Quality Control Board (RWQCB)

Some SRT projects may be required to prepare a RWQCB CWA Section 401 Water Quality Certification (WQC) notification/application to the local RWQCB, which may include a Storm Water Pollution Prevention Plan (SWPPP). WQC issuance is necessary prior to acquiring an USACE CWA Section 404(b)(1) permit.

### 5.4.5 Streambed Alteration Agreement - California Department of Fish and Wildlife (CDFW)

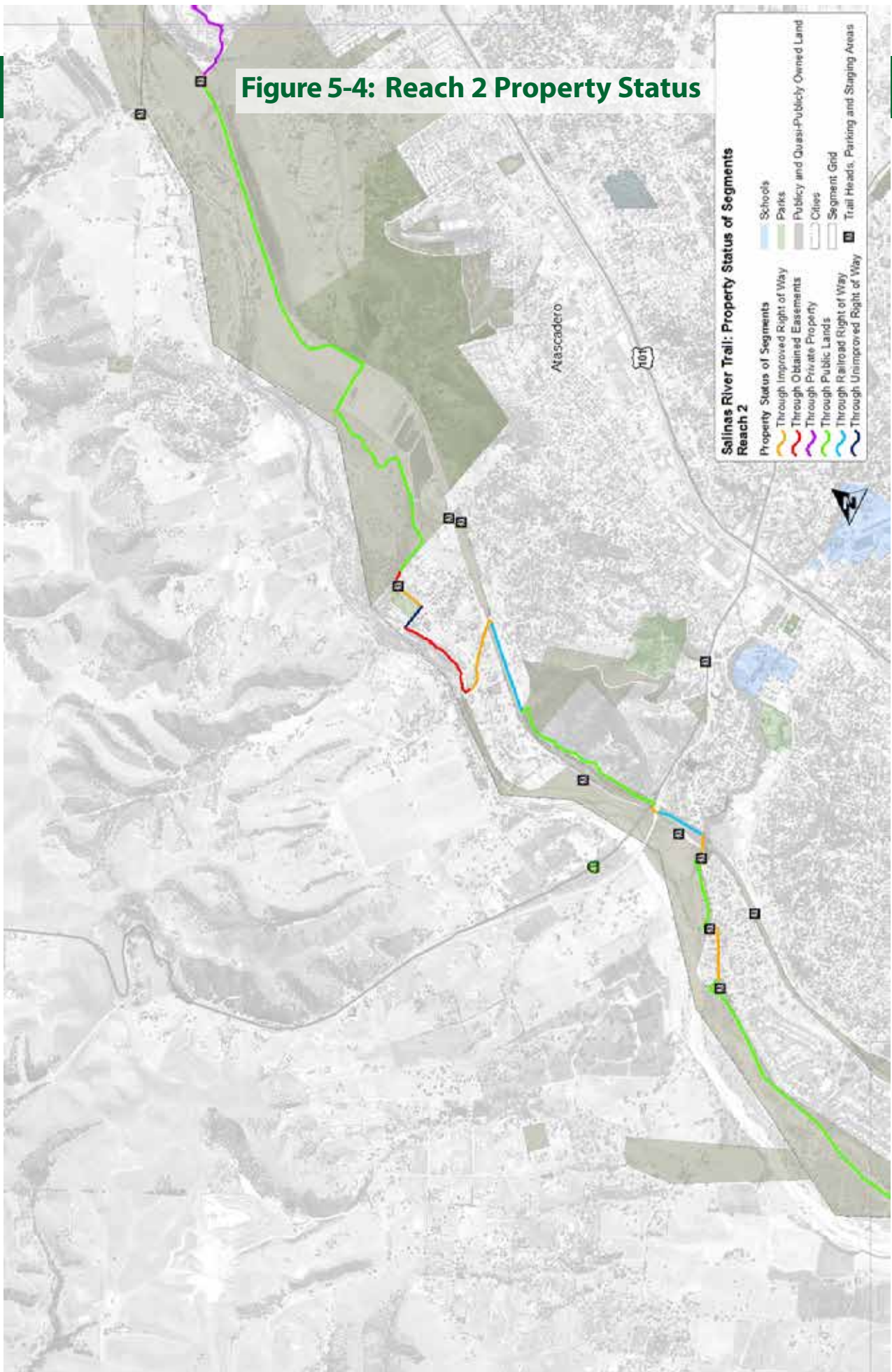
A Section 1602 Lake or Streambed Notification/Application for a Streambed Alteration Agreement will need to be submitted to CDFW for any project work that may impact a stream or related riparian habitat.

**Figure 5-3: Reach 1 Property Status**

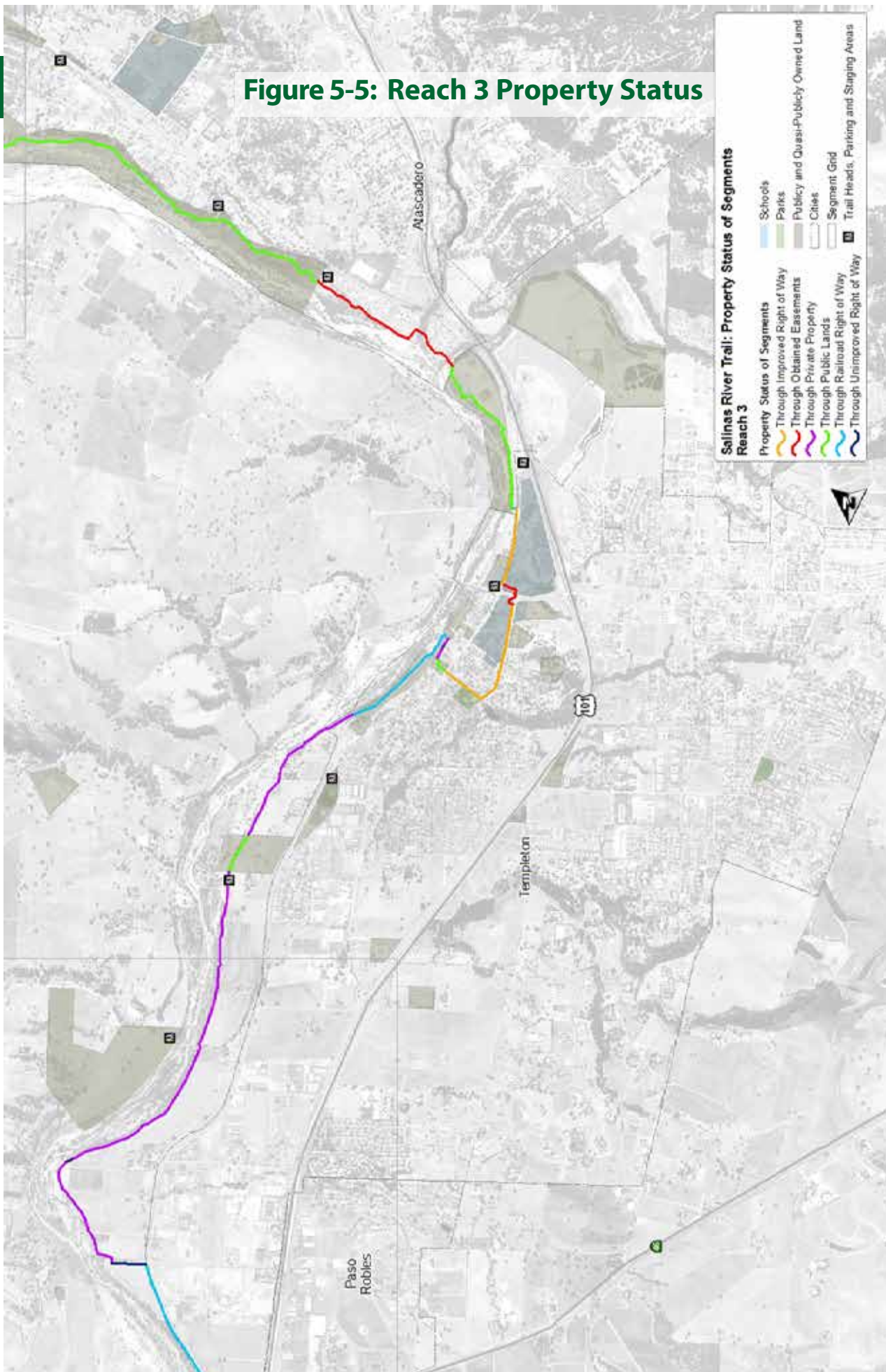




**Figure 5-4: Reach 2 Property Status**

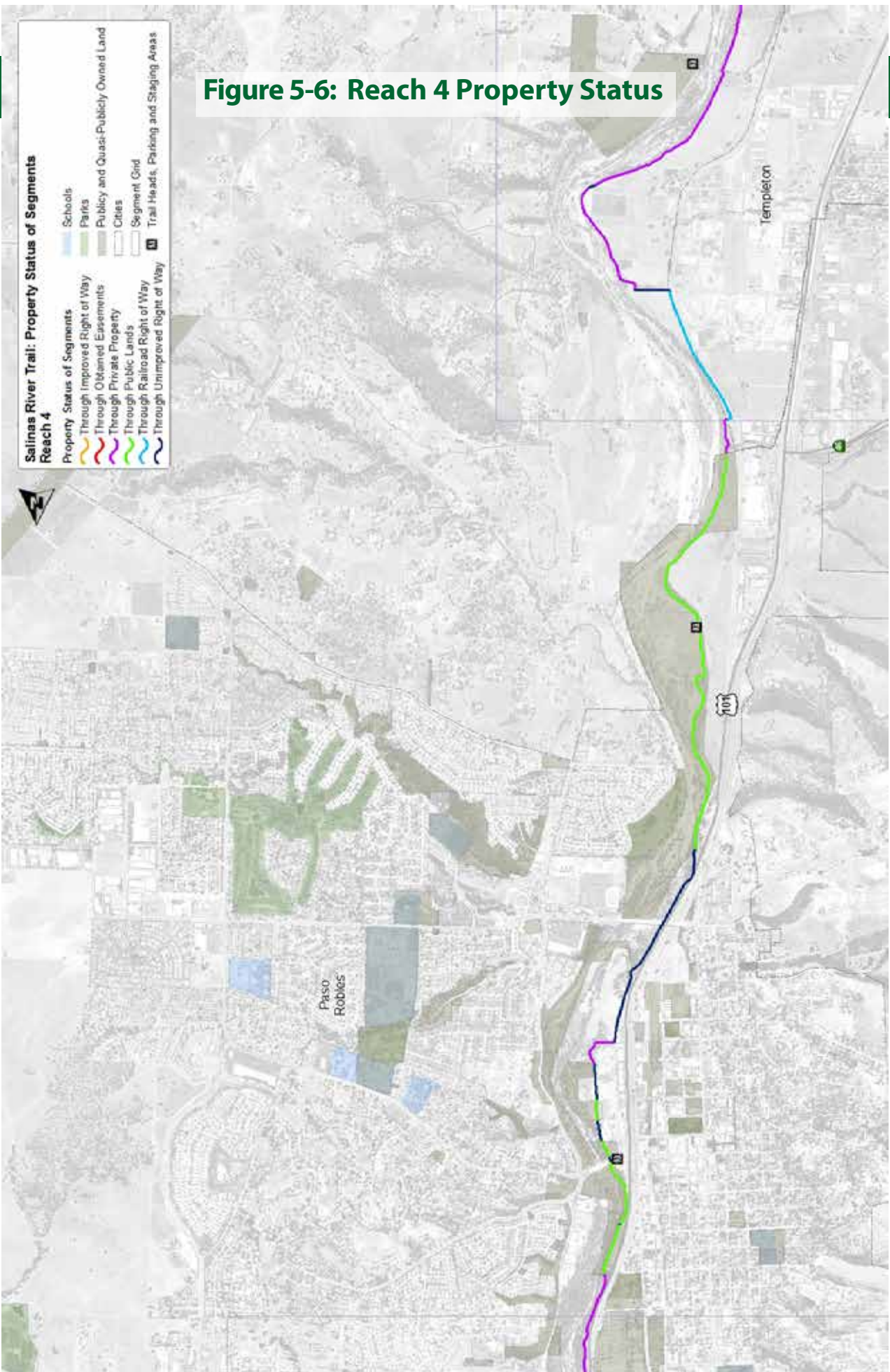


**Figure 5-5: Reach 3 Property Status**



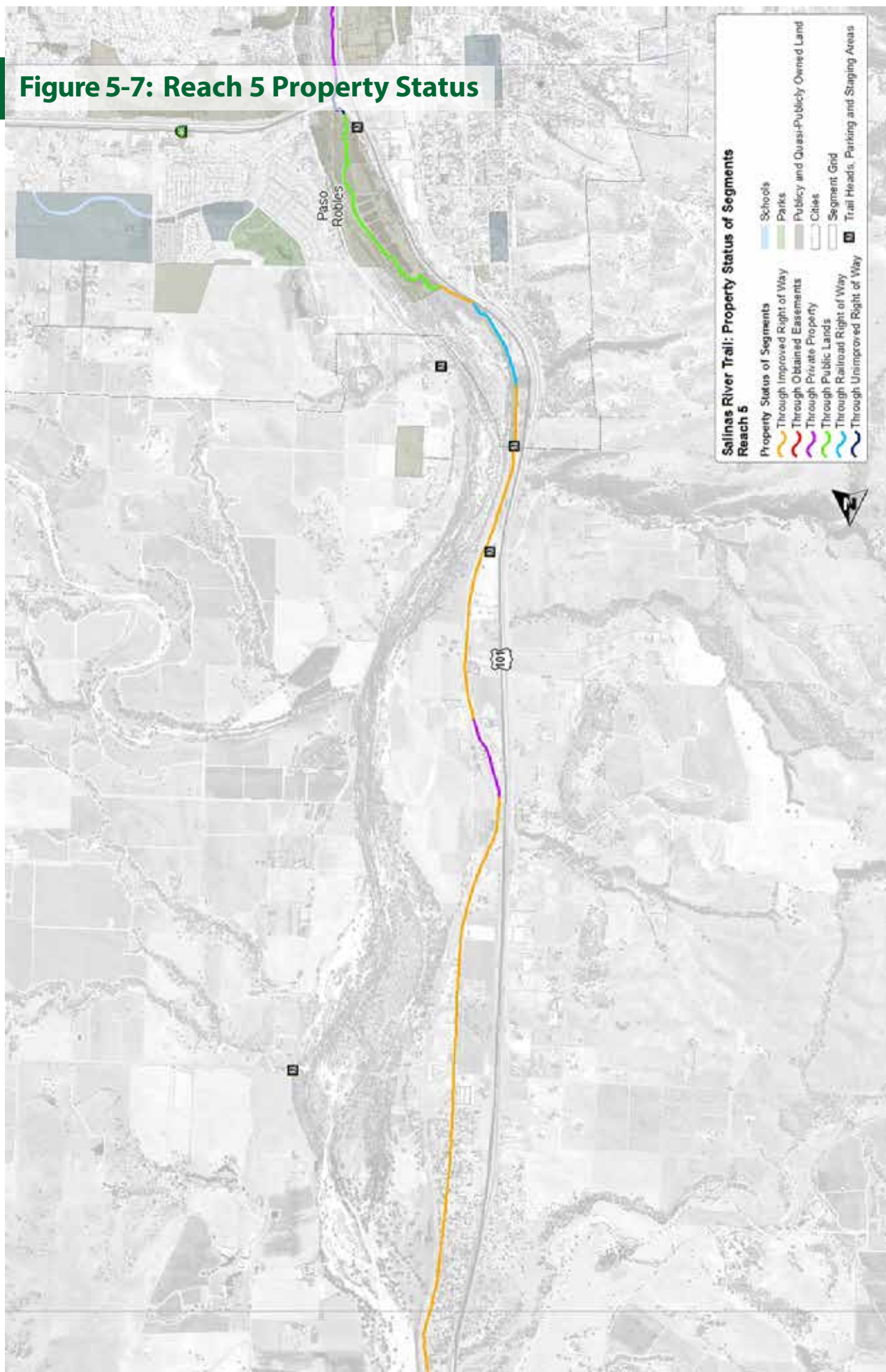


**Figure 5-6: Reach 4 Property Status**

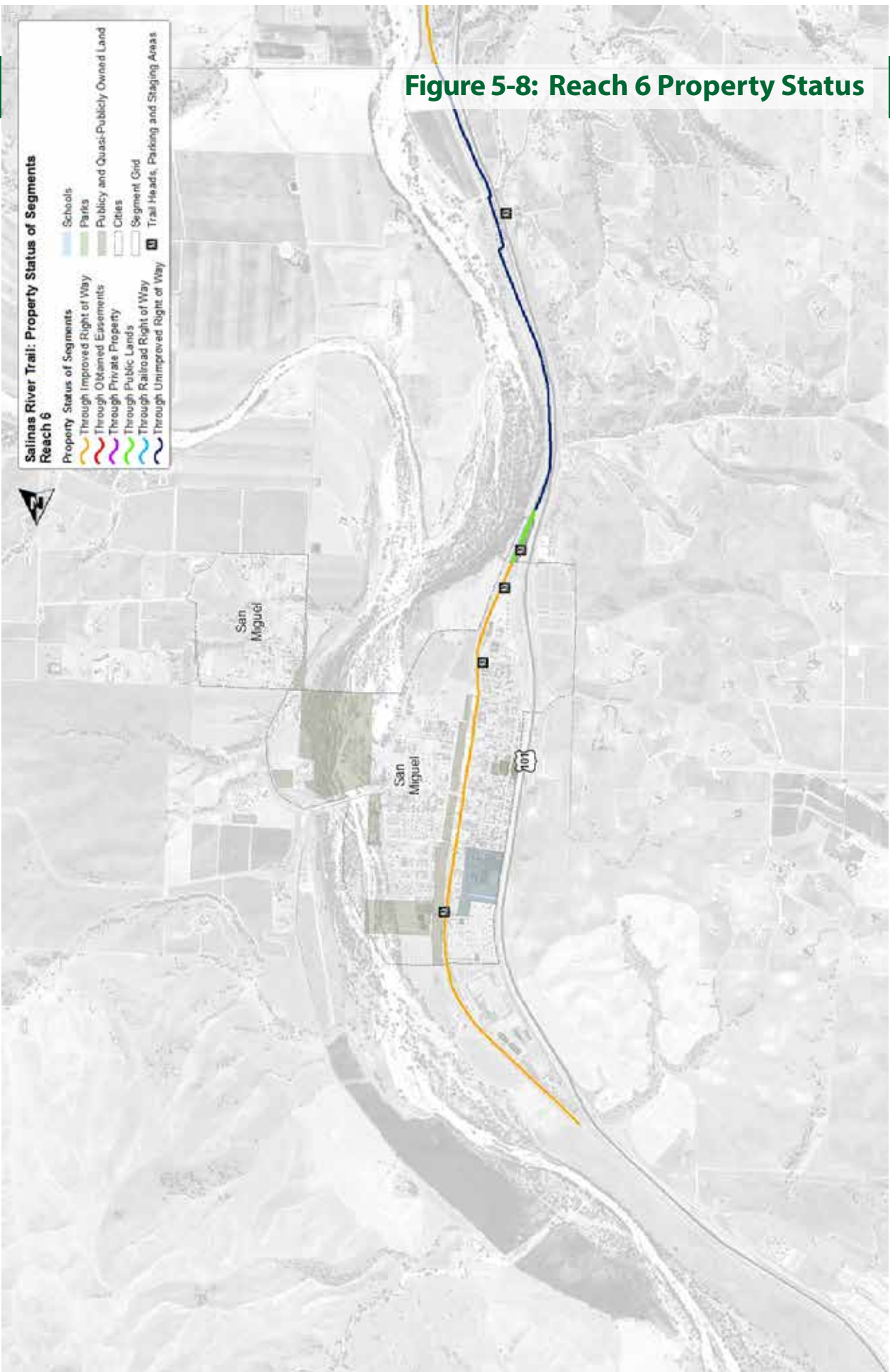




**Figure 5-7: Reach 5 Property Status**



**Figure 5-8: Reach 6 Property Status**





## 5.5 Legal Background

Two important legal precepts directly affect trail development along rivers. The first is the “public trust doctrine,” or the historic legal status of land along and within rivers (Section 5.5.1). The second is the series of statutes that limit liability for private property owners who allow public use of their land (Section 5.5.2).

### 5.5.1 Public Trust Doctrine

#### History

The public trust doctrine is the oldest “environmental” law with roots dating back to 535 A.D. Classical Roman law held that rivers have been public since ancient times, in all civilized societies. It held that “*all rivers and ports are public, hence the right of fishing in a port, or in rivers, is common to all men.*”

It was adopted by English common law and, upon signing the Declaration of Independence, the United States adopted English common law where consistent with the U.S. Constitution. To this day, state constitutions affirm public ownership of all running waters.

#### What the Law Says

The public trust doctrine holds that certain resources are above private ownership and reside in the trust of government for the benefit of the people. It is the duty of the government to administer these resources to the highest public interest. The doctrine is most often invoked in connection with access to navigable waterways.

Originally the doctrine only applied to the protection of fishing, navigation and commerce on waterways. However, it has since expanded in scope to include recreational and environmental benefits, and expanded in applicability to not only include navigable waters, but in some cases to all State-owned lands, fish and wildlife. California courts acknowledge that the doctrine was not “*burdened with an outmoded classification favoring one mode of utilization over another.*” Trust rights are not limited to commercially navigable streams, but apply also to streams capable of use by small boats, as well as for such purposes as bathing and swimming, fishing, hunting and general recreational purposes. *Marks v. Whitney*, 6 Cal.3d 251 (1971); *Baker v. Mack*, 19 Cal.App.3d 1040 (1971).

Public trust uses have been recognized as encompassing recreational activities, and that these uses are protected to the high water marks of lakes and rivers, even if these areas were temporarily dry. In an informal opinion in 1992, then Attorney General Dan Lungren advised that they could be exercised even on dry portions of the South Fork of the American River. *Letter to Hon. David Knowles*, Op. No. 92-206 (June 15, 1992).

### Public Access: Along versus Across

The California holdings have been influenced by its constitutional provision instructing the legislature to assure that frontage and tidal lands of all navigable waters remain open and accessible to its residents. The beds and banks of rivers and streams are a strip of public land, to be conserved for public benefit, even where the river or stream passes through private land. *People v. El Dorado County*, 96 Cal.App.3d 403 (1979)

California law allows for public access to public waters, but does not grant the public the right to cross private property to reach those waters. *Bolsa Land Co. v. Burdick*, 151 Cal. 254 (1907)

However, if it can be proven that a trail or access road has been used for at least ten years, rights to access across private property can be established through a prescriptive easement. *Gion v. City of Santa Cruz*, 2 Cal.3d 29 (1970) A number of statutes require public access as a condition of developing land. *Public Resources Code sections 30530-30214; Government Code sections 66478.1 et seq; Kern River Public Access Committee v. City of Bakersfield*, 170 Cal.App.3d 1205 (1985).

#### Definitions

(As they pertain to the Salinas River and the Public Trust Doctrine)

**Recreation:** The courts have come to recognize recreation as one form of traditional use among many. The courts have ruled that any and all non-destructive activities on these lands are legally protected, including picnics, camping, walking and other activities.

**Navigable Waters:** Waters capable of actual navigation. Waters can be classified as non-navigable, but this designation does not in itself determine public trust interests. The federal test of navigability is not a technical test. There are no measurements of river width, depth, flow, or steepness involved. The test is simply whether the river is usable as a route by the public, even in small craft such as canoes, kayaks, and rafts. Such a river is legally navigable even if it is temporarily dry, contains big rapids, waterfalls, and other obstructions at which boaters must portage (get out, walk around, then re-enter the water). A waterway can be navigable even if it is called a “stream” or “creek” on maps and signs, and even if it is only physically navigable during the rainy season, not all year.



**Ordinary High Water Mark:** The states own these rivers up to the “ordinary high water mark” (OHWM). This is the mark that people can sometimes actually see on the ground, where the high water has left debris, sand and gravel during its ordinary annual cycle, not during unusual flooding. The following physical characteristics should be considered when making an OHWM determination, to the extent that they can be identified and are deemed reasonably reliable:

- *Natural line impressed on the bank or “shelving”*
- *Changes in soil character*
- *Destruction of terrestrial vegetation*
- *Presence of litter and debris*
- *Vegetation matted down, bent, or absent*
- *Sediment sorting*

This list of OHWM characteristics is not exhaustive. Physical characteristics that correspond to the line on the shore established by the fluctuations of water may vary depending on the type of water body and conditions of the area. There are no “required” physical characteristics that must be present to make an OHWM determination. However, if physical evidence alone will be used for the determination, two or more characteristics should be identified, unless there is particularly strong evidence of one.

Where the physical characteristics are inconclusive, misleading, unreliable, or otherwise not evident, districts may determine the OHWM by using other appropriate means that consider the characteristics of the surrounding areas, provided those other means are reliable. Such other reliable methods that may be indicative of the OHWM include, but are not limited to, lake and stream flow data, elevation data, spillway height, flood predictions, historic records of water flow and statistical evidence. Characteristics associated with ordinary high water events that occur on a regular or frequent basis should be used when making OHWM determinations.

**Prescriptive Easement:** An easement upon another’s real property acquired by continued use without permission of the owner for a period provided by state law to establish the easement. The problems with prescriptive easements are that they do not show up on title reports, and the exact location and/or use of the easement is not always clear and occasionally moves by practice or erosion.

**Common Law:** Common Law is the precedent set by prior court decisions or case law; the idea of *stare decisis* or “let the decision stand.” It was very important in deciding court cases when there was no substantial codified law.

#### **Historical Cases Contributing to Doctrine Interpretation**

- Seminal case: “Mono Lake” - *National Audubon Society vs. Superior Court of Alpine County*
- *Bolsa Land Co. v. Burdick*, 151 Cal. 254 (1907)
- *Gion v. City of Santa Cruz*, 2 Cal.3d 29 (1970)
- *Kern River Public Access Committee v. City of Bakersfield*, 170 Cal.App.3d 1205 (1985)

#### **Other Sources**

- <http://www.csc.noaa.gov/digitalcoast/training/public-trust>
- <http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-05.pdf>
- <http://www.nationalrivers.org/us-law-public.htm>
- [http://www.waterscape.org/pubs/factsheet\\_waterrights/FS\\_CaliforniaWaterRights.htm](http://www.waterscape.org/pubs/factsheet_waterrights/FS_CaliforniaWaterRights.htm)



## 5.5.2 Statutes Limiting Private Property Liability

A number of California legal code sections address various aspects of indemnification for property owners who allow public use of their land.

### California Civil Code Section 846 (“Recreational Use Statute”)

This code section is probably the most pertinent to recreational trail development. It was enacted by the California legislature in 1963 to encourage landowners to allow public recreational use of their property. In exchange, the property owners would be immunized from liability should the person using the property injure themselves due to a condition on the property. The immunity would apply only to persons coming onto the property for recreational purposes, not if the person was a contractor, employee, or invited guest who was injured on the property.

*An owner of any estate or any other interest in real property, whether possessory or nonpossessory, owes no duty of care to keep the premises safe for entry or use by others for any recreational purpose or to give any warning of hazardous conditions, uses of, structures, or activities on such premises to persons entering for such purpose, except as provided in this section.*

*A “recreational purpose,” as used in this section, includes such activities as fishing, hunting, camping, water sports, hiking, spelunking, sport parachuting, riding, including animal riding, snowmobiling, and all other types of vehicular riding, rock collecting, sightseeing, picnicking, nature study, nature contacting, recreational gardening, gleaning, hang gliding, winter sports, and viewing or enjoying historical, archaeological, scenic, natural, or scientific sites.*

*An owner of any estate or any other interest in real property, whether possessory or nonpossessory, who gives permission to another for entry or use for the above purpose upon the premises does not thereby (a) extend any assurance that the premises are safe for such purpose, or (b) constitute the person to whom permission has been granted the legal status of an invitee or licensee to whom a duty of care is owed, or (c) assume responsibility for or incur liability for any injury to person or property caused by any act of such person to whom permission has been granted except as provided in this section.*

*This section does not limit the liability which otherwise exists (a) for willful or malicious failure to guard or warn against a dangerous condition, use, structure or activity; or (b) for injury suffered in any case where permission to enter for the above purpose was granted for a consideration other than the consideration, if any, paid to said landowner by the state, or where consideration has been received from others for the same purpose; or (c) to any persons who are expressly invited rather than merely permitted to come upon the premises by the landowner.*

*Nothing in this section creates a duty of care or ground of liability for injury to person or property.*

### Government Code Section 831.2

This code section simply states that public entities are not responsible for typical conditions present in aquatic open space.

*Neither a public entity nor a public employee is liable for an injury caused by a natural condition of any unimproved public property, including but not limited to any natural condition of any lake, stream, bay, river or beach.*

### Government Code Section 831.25

This code section describes that a public entity is not responsible for injury that occurred off-site unless it was caused by an on-site condition, and usually refers to some sort of land failure such as a landslide or subsidence.

*(a) Neither a public entity nor a public employee is liable for any damage or injury to property, or for emotional distress unless the plaintiff has suffered substantial physical injury, off the public entity’s property caused by land failure of any unimproved public property if the land failure was caused by a natural condition of the unimproved public property.*

*(b) For the purposes of this section, a natural condition exists and property shall be deemed unimproved notwithstanding the intervention of minor improvements made for the preservation or prudent management of the property in its unimproved state that did not contribute to the land failure.*

*(c) As used in this section, “land failure” means any movement of land, including a landslide, mudslide, creep, subsidence, and any other gradual or rapid movement of land.*

*(d) This section shall not benefit any public entity or public employee who had actual notice of probable damage that is likely to occur outside the public property because of land failure and who fails to give a reasonable warning of the danger to the affected property owners. Neither a public entity nor a public employee is liable for any damage or injury arising from the giving of a warning under this section.*

*(e) Nothing in this section shall limit the immunity provided by Section 831.2.*

*(f) Nothing in this section creates a duty of care or basis of liability for damage or injury to property or of liability for emotional distress.*

**Government Code Section 831.4**

This code section describes indemnification statutes as they apply to public access easements.

*A public entity, public employee, or a grantor of a public easement to a public entity for any of the following purposes, is not liable for an injury caused by a condition of:*

*(a) Any unpaved road which provides access to fishing, hunting, camping, hiking, riding, including animal and all types of vehicular riding, water sports, recreational or scenic areas and which is not a (1) city street or highway or (2) county, state or federal highway or (3) public street or highway of a joint highway district, boulevard district, bridge and highway district or similar district formed for the improvement or building of public streets or highways.*

*(b) Any trail used for the above purposes.*

*(c) Any paved trail, walkway, path, or sidewalk on an easement of way which has been granted to a public entity, which easement provides access to any unimproved property, so long as such public entity shall reasonably attempt to provide adequate warnings of the existence of any condition of the paved trail, walkway, path, or sidewalk which constitutes a hazard to health or safety. Warnings required by this subdivision shall only be required where pathways are paved, and such requirement shall not be construed to be a standard of care for any unpaved pathways or roads.*

**Government Code Section 831.5**

This code section describes indemnification protections that apply to non-profits who manage open space that provides public access.

*(a) The Legislature declares that innovative public access programs, such as agreements with public land trusts, can provide effective and responsible alternatives to costly public acquisition programs. The Legislature therefore declares that it is beneficial to the people of this state to encourage private nonprofit entities such as public land trusts to carry out programs that preserve open space or increase opportunities for the public to enjoy access to and use of natural resources if the programs are consistent (1) with public safety, (2) with the protection of the resources, and (3) with public and private rights.*

*(b) For the purposes of Sections 831.2, 831.25, 831.4, and 831.7, "public entity" includes a public land trust which meets all of the following conditions:*

*(1) It is a nonprofit organization existing under the provisions of Section 501(c) of the United States Internal Revenue Code.*

*(2) It has specifically set forth in its articles of incorporation, as among its principal charitable purposes, the conservation of land for public access, agricultural, scientific, historical, educational, recreational, scenic, or open-space opportunities.*

*(3) It has entered into an agreement with the... State Public Works Board or its designee for lands not located within the coastal zone or the Lake Tahoe region, on such terms and conditions as are mutually agreeable, requiring the public land trust to hold the lands or, where appropriate, to provide nondiscriminatory public access consistent with the protection and conservation of either coastal or other natural resources, or both. The conservancy or the board, as appropriate, shall periodically review the agreement and determine whether the public land trust is in compliance with the terms and conditions. In the event the conservancy or the board determines that the public land trust is not in substantial compliance with the agreement, the conservancy or the board shall cancel the agreement, and the provisions of Sections 831.2, 831.25, 831.4, and 831.7 shall no longer apply with regard to that public land trust.*

*(c) For the purposes of Sections 831.2, 831.25, 831.4, and 831.7, "public employee" includes an officer, authorized agent, or employee of any public land trust which is a public entity.*

**Government Code Section 831.7**

This code section addresses indemnification protections for owners from liability for injuries sustained during "hazardous recreational activities," including spectators.

*(a) Neither a public entity nor a public employee is liable to any person who participates in a hazardous recreational activity, including any person who assists the participant, or to any spectator who knew or reasonably should have known that the hazardous recreational activity created a substantial risk of injury to himself or herself and was voluntarily in the place of risk, or having the ability to do so failed to leave, for any damage or injury to property or persons arising out of that hazardous recreational activity.*





(b) As used in this section, “hazardous recreational activity” means a recreational activity conducted on property of a public entity that creates a substantial, as distinguished from a minor, trivial, or insignificant, risk of injury to a participant or a spectator.

“Hazardous recreational activity” also means:

(1) Water contact activities, except diving, in places where, or at a time when, lifeguards are not provided and reasonable warning thereof has been given, or the injured party should reasonably have known that there was no lifeguard provided at the time.

(2) Any form of diving into water from other than a diving board or diving platform, or at any place or from any structure where diving is prohibited and reasonable warning thereof has been given.

(3) Animal riding, including equestrian competition, archery, bicycle racing or jumping, mountain bicycling, boating, cross country and downhill skiing, hang gliding, kayaking, motorized vehicle racing, off-road motorcycling or four-wheel driving of any kind, orienteering, pistol and rifle shooting, rock climbing, rocketeering, rodeo, self-contained underwater breathing apparatus (SCUBA) diving, spelunking, skydiving, sport parachuting, paragliding, body contact sports, surfing, trampolining, tree climbing, tree rope swinging, waterskiing, white water rafting, and windsurfing. For the purposes of this subdivision, “mountain bicycling” does not include riding a bicycle on paved pathways, roadways, or sidewalks. For the purpose of this paragraph, “body contact sports” means sports in which it is reasonably foreseeable that there will be rough bodily contact with one or more participants.

(c) (1) Notwithstanding subdivision (a), this section does not limit liability that would otherwise exist for any of the following:

(A) Failure of the public entity or employee to guard or warn of a known dangerous condition or of another hazardous recreational activity known to the public entity or employee that is not reasonably assumed by the participant as inherently a part of the hazardous recreational activity out of which the damage or injury arose.

(B) Damage or injury suffered in any case where permission to participate in the hazardous recreational activity was granted for a specific fee. For the purpose of this subparagraph, “specific fee” does not include a fee or consideration charged for a general purpose such as a general park admission charge, a vehicle entry or parking fee, or an administrative or group use application or permit fee, as distinguished from a specific fee charged for participation in the specific hazardous recreational activity out of which the damage or injury arose.

(C) Injury suffered to the extent proximately caused by the negligent failure of the public entity or public employee to properly construct or maintain in good repair any structure, recreational equipment or machinery, or substantial work of improvement utilized in the hazardous recreational activity out of which the damage or injury arose.

(D) Damage or injury suffered in any case where the public entity or employee recklessly or with gross negligence promoted the participation in or observance of a hazardous recreational activity.

For purposes of this subparagraph, promotional literature or a public announcement or advertisement that merely describes the available facilities and services on the property does not in itself constitute a reckless or grossly negligent promotion.

(E) An act of gross negligence by a public entity or a public employee that is the proximate cause of the injury.

(2) Nothing in this subdivision creates a duty of care or basis of liability for personal injury or damage to personal property.

(d) Nothing in this section limits the liability of an independent concessionaire, or any person or organization other than the public entity, whether or not the person or organization has a contractual relationship with the public entity to use the public property, for injuries or damages suffered in any case as a result of the operation of a hazardous recreational activity on public property by the concessionaire, person, or organization.

